89 1892

# THE... CANADA LANCET

A MONTHLY JOURNAL OF MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS

EDITED BY

G. P. SYLVESTER, M.D.

30

VOL. XXXI.

1897-98

306395
20.11.34

WARWICK BRO'S & RUTTER, Printers,
68 and 70 Front St. West, Toronto.
1899.

R
11
C3
V.30

LIBRARY
MAY 8 1972
UNIVERSITY OF TORONTO

# The Canada Lancet.

VOL. XXX.] TORONTO, SEPTEMBER, 1897. [No. 1.

EDITOR:
JOHN L. DAVISON, M.D.

ASSOCIATE EDITORS:

*Surgery:*
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine:*
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology:*
J. ALGERNON TEMPLE, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics:*
CAMPBELL MEYERS, M.D.

*Pathology and Bacteriology:*
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat:*
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D

*Pædiatrics:*
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M.D.

*Eye and Ear:*
G. STERLING RYERSON, M.D.
C. TROW, M.D.

*Genito Urinary Surgery:*—G. P. SYLVESTER, M.D., Business Manager

## INERTIA OF THE UTERUS FOLLOWING THE USE OF CHLOROFORM.

BY J. A. WILLIAMS, M.D., L.R.C.P. LOND., INGERSOLL, ONT.

MR. PRESIDENT AND GENTLEMEN:—

The case we bring before you in this paper is one from general practice, such a one as may occur at any time without warning. For emergencies, that are at once dangerous to the patient and to the reputation of the physician, we should have in our minds a well thought out method of procedure, otherwise we may be taken at a serious disadvantage. It is not claimed that there is anything new or original in the methods pursued, or in the thoughts herein given expression to, but it is hoped they will lead to such consideration of the subject, that after your discussions we can settle in our minds a line of treatment in readiness for such cases.

Mrs. A. is a tall, muscular woman, bony and angular, with a broad pelvis and no superabundance of flesh. A woman accustomed to hard work, has raised several children, and is the mother of grown-up daughters. She is approaching forty years of age. She had prepared herself for an "easy time" by taking five bottles of a popular remedy called "Indian Woman's Balm." We know nothing of its composition. She was taken in labor early in the afternoon on a spring day in 1896. The services of Dr. Rogers were called into requisition. The labor progressed favorably until the head was well engaged in the pelvis, when advance-

ment became much less marked, and at times seemed to have ceased, notwithstanding the pains were regular and strong. As she was vigorous and in good health, nature was allowed to put forth her best efforts until well along in the night, when advancement was no longer appreciable. As there was plenty of room in the pelvis the doctor determined upon the use of the forceps. After administering chloroform they were applied; but, notwithstanding the doctor's best efforts, he was unable to complete the accouchment. Recognizing that the case was out of the ordinary, and considering the arduousness and risk of properly managing a difficult forceps case, and at the same time giving the anesthetic to a patient rather obstreperous, the doctor determined upon having assistance. At this time, about six in the morning, the writer was called in.

The patient's general condition was satisfactory. There was no untoward symptoms, except some indications of fatigue. The head was well down in the pelvis, which was sufficiently roomy that with the aid of forceps we might reasonably expect speedy delivery. The fœtus was in the first, or left occipito anterior position. At the request of Dr. Rogers I administered chloroform, and he re-applied the forceps. Strong efforts were made to bring forward the child, and progress was made; but, in consequence of a tiresome night and hard work, the doctor became fatigued and invited me to a change of occupation. He now administered the anesthetics while I used the instruments. When the head was delivered —no easy task—there was great difficulty with the shoulders, because of their large size relatively to the head. Finally, the body was born, much more slowly than usual, because of its large size. The child weighed fourteen pounds. During the progress of the delivery the doctor followed the fundus, making pressure with his hand, and continued to do so for a short time afterwards. When the infant had been disposed of, and after waiting a few moments, I returned for the placenta, which was found lying in the vagina. It, with a small quantity of clots, was removed.

To facilitate the use of the forceps, the patient had been placed transversely on the bed, with the hips close to the edge, the legs supported. This position enabled me to notice that the delivery was being followed by an unusual amount of hæmorrhage. Proceeding to ascertain the cause, the hand was passed to examine the condition of the os and the uterus. No os or uterus was recognizable, but in place of these a pelvis filled with fresh clots and blood. On a more careful examination the os was found to have been dilated by the passage of the fœtus and to have remained so, while at the same time the fundus had completely collapsed. The uterus was without tonicity. The doctor's hand, which had been removed from the uterine globe, was now returned to the lower abdominal region, but the tumor was gone. Hot water was at once called for, and fortunately, thanks to the forethought of the doctor, a goodly supply was immediately available. While the nurse was procuring it a hypodermic injection of the fluid extract of ergot was administered, and immediately after one of strychnine. A Davidson's syringe, the only one available, was brought into requisition. The nozzle was carried boldly to the top of the uterus, and the collapsed portion, still flaccid, carried back to its place. The hot water, so hot it could scarcely be borne by the hand,

was then pumped in, and at the same time friction was made with the one hand in the interior and massage with the other on the exterior of the uterus. After about a quart of water had been forced in and a correspondingly large place had been cleaned of clots and blood at the fundus, for the bleeding ceased in that part with which the water came in contact, and contractions commenced. As the hand and water cleared and cleaned down to the cervix the contractions followed, leaving a firmly closed, clean uterus. The passages were then washed out, and the danger was over. There was no return of the inertia. The patient progressed favorably, and on the tenth day was in the street. Very shortly afterwards, however, she had an attack of pelvic cellulitis, from which she was in bed for some weeks.

On following this case, the first question that forces itself upon us is, why did this uterus fail to contract, why this inertia? When there is a marked pre-disposing cause, such as the weakness resulting from albuminuria, from frequent recurring pregnancies; from over-distensions, as from pluriparity or from polyhydramnios; or from the effect of chronic diseases, there are usually premonitory warnings, by weak contractions through the first and second stages of the labor, heralding insufficient uterine action in the third stage. In this case none of these conditions existed, and there were no such premonitory warnings. The pains were strong and vigorous through both stages.

In the absence of these predisposing causes, we look for something more immediate. The too rapid emptying of the uterus is considered among these. This cause had no existence in this case, for the very significant reason that we were not able to make a rapid delivery had we been so disposed. Second, when the uterus is rapidly emptied, and care is not taken to follow down with the hands upon the abdomen, lessening the organ as the contents are removed. Here, again, we were not at fault. The rapid delivery did not occur, and Doctor Rogers carefully followed down the uterus during its descent, and held it for some time.

Other than the time the labor lasted, about eighteen hours, and its severity, there were none of the usually assigned causes of inertia present, and neither of these was sufficiently marked to lead to an expectation of this kind.

In the absence of other causes, we are forced to look upon the administration of chloroform as being the most potent influence, probably aided by the effect of eighteen hours' severe labor.

Opinions of leading obstetricians do not harmonize as to the effect of this anesthetic on uterine contractions. While some regard it as being without effect, others, whose opinions are no less deserving of weight, believe its influence so great that it can be used only with the utmost care in obstetric practice. We will make no attempt to follow writers, but will make bold to say, our experience leads to the belief that the truth is between these extremes. Much depends on the extent to which the anesthesia is carried. The more profound, the greater the extent to which it influences uterine action, and the less its anesthetic influence, the less disturbance of the normal contractions.

It will be within the experience of most practitioners, that immediately it is given the pains become less frequent and have less strength. This influence continues during its administration. Because of this, when the contents of the womb have escaped, there is an absence of or a diminution of, that contraction that is very necessary and usually follows a normal case. Post-partum hemorrhages are consequently more frequent after its administration, unless precautions are taken to prevent them. Fortunately, in obstetric cases the full benefit may be obtained from the anesthetic without the anesthesia being carried to the extent that is necessary for major operations; by taking care to limit the effect and at the same time to use such measures as will stimulate uterine contractions, we may secure all the advantages with comparatively little risk of the dangers. In this case, partially perhaps from a somewhat lengthened administration, our patient was too profoundly anesthetised at the time the contents were removed. While the contractions were sufficiently strong to aid in the final expulsion of the child, and in the detachment and expulsion of the placenta, yet when the internal irritation of these substances was gone, the period of rest which is usual in normal cases became prolonged into a dangerous inertia. In the period of rest following natural birth there is not an entire absence of tonicity. While the organ is passive it still retains form, and may by slight irritation be called into activity. In this complete inertia all form is gone, the uterus is in a flaccid condition.

This inertia allowed "Spontaneous Passive Uterine Inversion to take place." Duncan recognizes four kinds of inversion as to methods of occurrence. These are: First, Spontaneous Passive Uterine Inversion; second, Artificial Passive Uterine Inversion; third, Spontaneous Active Uterine Inversion; and, fourth, Artificial Active Uterine Inversion. For any of these to take place there must be partial inertia. For the first and second there must be complete inertia, as we had in this case. In the active form, the endeavor in treatment, and the chief difficulty, is in the restoration of the organ to its natural position—its reposition. This being fully accomplished, the contracti will maintain it so long as that contraction is continued in full natural force. In the passive forms the difficulty is not in the reposition, but in overcoming the inertia which allowed the inversion to take place. In either case the consequence may be serious, if prompt steps are not taken, or if these are not crowned with success. Our case being one of passive inversion, the endeavor was to overcome the inertia.

As the chloroform was the main cause, the first step must be to get from under its influence. To this end we discontinue to administer it, and by an abundant supply of fresh air we facilitate the escape of what is in the system. We had in our favor the very important fact, nicely expressed by a recent writer, "That chloroform produces no permanent paralysis, only anesthesia, and if elimination and excitation can be obtained, the temporary condition will soon be overcome." Before, however, this inertia is overcome, it is of the first importance that the organ shall have been reposited, otherwise there may be great difficulty in doing so. Hence the necessity of early recognition and prompt action.

Though the cause is largely removed, we would not be justified in waiting for nature unaided to resume her wonted functions and restore the tonicity. Could time be allowed without danger, there is no doubt she would do so. But each moment permits of great loss of blood, which impairs, if it does not endanger, vitality. We must, therefore, take steps to call her from slumber to her accustomed activity.

In our case we gave ergot and strychnine hypodermatically. We are quite aware some good therapeutists tell us these remedies neither severally nor jointly can initiate uterine pain. Yet, admittedly, they have the power of stimulating into activity the nervous system, and this arousing of the vital energies plays no unimportant part in this case, and is practically what we are after. It is admitted, too, that when uterine contractions do exist, these remedies have the effect of stimulating them into greater activity. But, say some, no reliance can be placed upon their producing any effect in less than about two hours after administration, and the case will be terminated before that time. If, for the sake of argument, we concede this to be true, they still come into play to prevent subsequent relaxation which is liable to recur. When administered hypodermatically, we do not believe the action is nearly so long delayed. Fifteen minutes would be more nearly correct, and in many instances evidence of the effects are appreciable in even less time. Were the administration by the stomach we could quite understand the long time, for chloroform anesthesia will much diminish, if it does not entirely arrest, absorption from this organ. Then again, there may be material in the stomach with which our potion becomes intermingled. Absorption of the whole mass must take place before the effect of the dose is secured. All things considered, we are strongly of the opinion that hypodermatic administration is best suited for emergencies.

Our duty is not completed by the removal of the cause and the administration of medicine. Experience has brought into use expedients even more prompt in their action than these. What we used in this case was friction and hot water. The former is an old expedient that has stood the test of time, and is not likely to be superseded. It requires no instrument other than a pair of clean hands, and while the one is in the interior of the uterus making friction on its surface, the other is on the exterior after the manner of bimanual manipulation, using massage. This method is always available, and could the facts be known there is no doubt the saving of many lives would go to its credit. The hot water, while it has not received from the profession the same lengthened recognition, is still a most valuable expedient. Used conjointly, they are a most prompt means of arousing uterine energy and arresting hemorrhage. In our case they did not fail us.

From this case we may draw several important lessons. First, when we use chloroform we should make it a rule to use the least possible amount that will secure the object desired, to have the anesthesia as light and as short as possible. Second, we should make preparation in advance to counteract the effects, which may possibly come without warning. Among the preparations made we may mention the administration of some oxytocic sufficiently early, that its period of activity may be reached by the time

of the delivery. Ergot and strychnine hypodermatically administered will usually meet the requirements; to have prepared at about the right temperature a large supply of boiled hot water, with the necessary appliances for washing out the uterus; and to have a hypodermic syringe, *in order* with ether, atropine, ergot and strychnine in convenient forms for prompt administration.

## HÆMORRHAGIC PANCREATITIS.*

BY CHARLES B. SHUTTLEWORTH, M.D.C.M., ASSISTANT DEMONSTRATOR OF ANATOMY TRINITY MEDICAL COLLEGE, TORONTO.

During the last few years, inflammation of the pancreas has attracted considerable attention. Until 1889, when Fitz delivered the Middleton-Goldsmith lecture on Acute Pancreatitis, this interesting affection was not well understood. Fitz, in a masterly manner, gave a brief history, analyzed each of the cases reported up to that time, and brought pancreatitis within the range of the diagnostician, besides throwing some light on its etiology. From a review of the accumulated literature on the subject, he points out that acute pancreatitis is a well-characterized disease, and not a rare affection, but one which should be recognized on account of its probable origin in an otherwise simple affection—a gastro-duodenitis, extending by way of the pancreatic duct. There is also a liability of confounding the disease with intestinal obstruction, with a subsequent useless cœliotomy, which operation, if performed in the early stage of acute inflammation of the pancreas, when symptoms of collapse are common, renders the procedure extremely dangerous. Fitz classifies pancreatitis under three headings: (*a*) suppurative, (*b*) hæmorrhagic, and (*c*) gangrenous.

As a history of every case occurring in practice may bring out some new feature which may assist in the diagnosis of a disease which, on account of its sudden termination, has possible medico-legal bearings, I thought the relation of the facts, in a case of the hæmorrhagic form which has recently come under my notice, might be of interest.

T. S., male, aged 35 years: occupation, brakesman: active, robust, but intemperate in the use of alcohol. Had usually enjoyed good health, with the exception of occasional attacks of indigestion. About two years ago patient increased rapidly in weight, and became very fat, at the time of his death weighing 260 pounds. His last illness was of six days' duration, and commenced suddenly in the evening, after a hearty meal. He complained of deep-seated pain in the epigastric region, in the middle line, just under the costal margin. This was accompanied by nausea, and followed by bilious vomiting. The next day he procured some medicine from a druggist and was told to seek medical advice. Hot stupes were during the afternoon applied to the abdomen, which somewhat relieved the pain. He vomited two or three times an hour throughout the day, and on one occasion some blood clots were ejected. On the morning

* Read before the Ontario Medical Association, June, 1897.

of the third day he felt very weak, but got up and dressed, ate a light breakfast and went about the house. Pain was not very marked, and, towards night, had entirely disappeared, although vomiting was incessant. The bowels had not moved up to this time. In the evening he became delirious, was much excited, and thought his friends were conspiring to take his life. He went out and wandered about the streets all night. On the following afternoon, when next seen, he was acting in an irrational manner, and was taken home and put to bed. He did not complain of any pain, but the abdomen was somewhat swollen. On the fifth day sedatives were administered, but he was delirious at times, and restraint was sometimes necessary. He was very anxious and restless, walking about continually. The bowels moved three times during the day, and a small quantity of dark urine was voided. During the night he gradually got worse, breathing became rapid, the pulse was feeble, and the skin covered with cold sweat. This was followed by muttering delirium. Bowels moved involuntarily twice during the night, and death occurred by collapse at daybreak.

At the autopsy, which took place on the same day, the following notes were made: Subcutaneous fat: not great in amount and normal in appearance. Thoracic viscera: healthy; small ante-mortem clot present in right heart. On opening the abdominal cavity, the fat everywhere presented a striking appearance. Numerous cheesy, opaque, tallowy, white plaques, of an irregular shape, varying in size from that of a pin-head to five millemetres in diameter, were generally distributed in the subperitoneal fatty tissue, even in the pelvis, contrasting strongly with the relatively transparent normal fat. These necrotic areas were not elevated above the surface of the peritoneum, and varied much in thickness. The adipose tissue between the folds of the mesentery, mesocolon, and omentum, as well as the perinephritic fat were studded throughout with similar spots, which, since Balser's paper, have been characterized as *disseminated fat-necrosis*. The liver was large and soft, and showed evidence of fatty degeneration. The gall-bladder was empty, and there were not any calculi in the hepatic ducts. Spleen and kidneys healthy. Urinary bladder empty. The stomach contained a quantity of dark fluid, the walls being normal in appearance. The intestines were distended with gas. The peritoneum showed no signs of inflammation and no fluid was found in the abdominal cavity. There was a hæmorrhagic effusion in the root of the mesentery.

The pancreas was embedded in a large quantity of adipose tissue, and on its external surface appeared purplish-black. The organ was large and very firm, weighing 11 ounces (normal weight, 2 to 3½ oz). On section it presented the following gross appearances. There was a large hæmorrhagic effusion of a dark reddish-brown color into the head of the organ, with numerous smaller areas of a similar character throughout the entire specimen. Areas of fat necrosis could be seen in the interlobular fat, which was abundant. The canal of Wirsung did not contain a calculus.

Microscopic examination showed an extensive interlobular infiltration of fat continuous with the parapancreatic fatty tissue, which would in

part account for the great enlargement of the organ. The interlobular tissue showed the presence of a hæmorrhagic exudate and numerous accumulations of round cells. In some places the fatty tissue appeared granular, and clumps of very fine, brownish, acicular crystals were discernible. These were evidently fatty in origin. The cells of the lobules were indistinct and faintly granular, the nuclei being obscure. In some parts the lobules appeared necrotic. The areas of fat-necrosis consisted of granular detritus, fat droplets and fatty crystals, some of which exhibited a trochate form.

It is to be regretted that a bacteriological examination was not made at the post-mortem.

The symptoms as thus related correspond closely with those observed in similar cases, the exception being the presence of diarrhœa on the last two days of the patient's illness.

Hæmorrhagic pancreatitis generally occurs in perfectly healthy adult subjects, although Dr. McPhedran, of Toronto, has reported an instance in a child nine months old. One-half of the subjects in the cases reported have been very fat, and a small percentage addicted to alcohol. The disease is ushered in by abdominal distress, without obvious cause, though usually attributed to some irregularity in diet. The pain is severe, sometimes agonizing; either constant or intermittent, and is usually located deep in the epigastric region, sometimes to the left of the mesial line. Nausea, followed by vomiting, may be absent, but in the majority of instances is incessant, and may be bilious in character, and even black in color. Tympanites is generally noted, and may be very marked. This is probably due to paralysis of the muscular wall of the bowel by interference with its nervous mechanism, and the subsequent collection of flatus in the coils of the intestine. Constipation is the rule, and resists medicinal treatment, so that obstruction of the bowels is a special factor in the differential diagnosis.

Fever is not usually noted, but when present occurs early and is not marked. The temperature has been frequently sub-normal. Collapse almost invariably supervenes, and usually immediately precedes death. This has been attributed to the involvement of the solar plexus and semilunar ganglia by the hæmorrhagic effusion in and about the pancreas. This will also account for the intense pain experienced in the disease. Death usually results in from two to four days, but recovery is possible, or the disease may recur. Suppuration or the gangrenous form may follow the hæmorrhagic variety.

The etiology of the disease is not yet definitely settled. A history of gastro-intestinal derangement has been obtained in a large percentage of the reported cases, and it is possible that the pancreas is secondarily affected by way of its excretory duct; but if this is the case surely the disease would be of more frequent occurrence. Further investigation from a biological standpoint will, no doubt, clear up this matter, but so far the results of bacteriological investigation have been disappointing. Outside of a variety of bacteria of mild infective character, the cultures made from the pancreas in this affection have proved sterile. Hlava produced hæmorrhagic pancreatitis by injecting the Klebs-Lœffler bacil-

lus into the pancreas of a cat after laparotomy. Predisposing causes are trauma and biliary or pancreatic calculi in the duct.

Various theories have been brought forward to explain the cause of the disseminated fat-necrosis. Balser, in 1882, considered that the frequent occurrence of pancreatitis with fat-necrosis suggested a close relationship between them. He believed the condition was due to the excessive growth of fat destroying the tissue round about, and from lack of nutrition, causing death of the central portions of fat. He held that the changes in the pancreas were secondary, and also observed that fat-necrosis has often been found in the interlobular fatty tissue of the pancreas, without association with any symptoms during life. Chiari regarded the process as degenerative. Fitz describes two forms of necrosis, a necrobiotic variety and an inflammatory form, secondary to acute pancreatitis, as suggested by the inflammatory infiltration around the periphery of the necrotic areas. Rolleston holds that the death of the fat is brought about by some trophic influences exerted by the abdominal sympathetic system, but offers no proof in support of his theory.

Fat-necrosis has been experimentally produced by Langerhans, by injecting an extract of pancreas into the adipose tissues of animals. He believes that the process is due to the decomposition of neutral fats into glycerine and fatty acid by the fat-splitting ferment of the pancreas, and the subsequent union of lime salts with the acid to form a soap. This view has been confirmed chemically by Barker, of Johns Hopkins Hospital. Hildebrand and others have produced these necrotic areas by ligating portions of the pancreas, and also the efferent vessels, so preventing the secretion of the organ from finding exit by its normal channel. This has also been brought about by introducing portions of the pancreas into the abdominal cavities of animals. Hildebrand injected trypsin into the peritoneal cavity and produced hæmorrhages. He suggests that this result, so often associated with pancreatitis, might be due to trypsin, and that the fat-necrosis was attributable to the same cause as that advanced by Langerhans. Williams, of Buffalo, recently confirmed Hildebrand's experiments on the lower animals.

If the pancreatic affection is responsible for the disseminated fat-necrosis, it is difficult to understand how such complete and extensive degeneration of the fatty tissues could be produced in the short course of such a rapidly fatal disease.

These cases of hæmorrhagic pancreatitis are especially important, not that the disease is of frequent occurrence, but that it must be taken into consideration in the diagnosis from other affections which are more often met with—namely, irritant poisoning, perforative peritonitis, and acute intestinal obstruction.

Since the publication of Fitz's elaborate treatise, a correct antemortem diagnosis has been made by Thayer, Körte, Cutler, Atkinson, and Fitz himself. Irritant poisoning is to be excluded by the history of the case, and by a chemical and microscopical examination of the stomach and vomited matter. The absence of pain after meals, blood in the stools, and general peritonitis would exclude perforative ulcer of the stomach and duodenum, as would also a consideration of the history of

the case. Perforation of the gall-bladder by a calculus would be precluded by biliary colic and icterus, and the seat of the pain would rather indicate the gall-bladder as the source of the trouble. Acute intestinal obstruction very closely simulates hæmorrhagic pancreatitis, so much, indeed, that numerous instances have been cited in which unsuccessful laparotomy has been performed and no obstruction found. It has been pointed out by Fitz that intestinal obstruction, which offers the greatest difficulty in differential diagnosis, may be eliminated "by determining, through injection, the patency and capacity of the large intestines, by the immediate presence of localized tenderness, and by the usual absence of conspicuous general tympany or limited distention of intestinal coils."

The affection may, however, prevent serious if not insurmountable difficulties in diagnosis, which only an exploratory abdominal incision can clear up; but on account of the grave implication of large and important nervous structures in the neighborhood of the pancreas these operative cases generally terminate disastrously.

The treatment of hæmorrhagic pancreatitis can be but palliative. By the time a correct diagnosis is arrived at, the damage has already been done; and, moreover, the action of therapeutic agents on the pancreas is, as yet, but little understood. It is only when the process ends in abscess, or gangrene, that surgical measures may be resorted to with a fair hope of success.

---

CATGUT STERILIZATION.—Senn's modification of Hofmeister's method is as follows: (1) The catgut is wound tightly on an ordinary large glass test-tube. (2) Immersion twelve to forty-eight hours in aqueous solution of formulin two to four per cent. (3) Immersion in flowing water at least twelve hours to free the gut from the formulin. (4) Boiling in water from ten to thirty minutes. Ten to twelve minutes is amply sufficient, as all microbes and spores are killed by exposure to boiling heat for that length of time. (5) Hardening and preservation in absolute alcohol containing five per cent. of glycerin and one-tenth of one per cent. of corrosive sublimate.

After boiling the deformalinized catgut for twelve to fifteen minutes it is cut into pieces of desirable length, tied into small bundles containing from six to twelve threads, when it is immersed and kept ready for use in the following mixture: Absolute alcohol fifty, glycerin fifty, iodoform (finely pulverized) one hundred. The alcohol dissolves part of the iodoform. The bottle containing the catgut should be closed with a well-fitting glass stopper, and should be shaken well every few days to bring the dissolving iodoform in contact with the threads. The catgut can be kept in this mixture for any length of time without losing its strength. One of the valuable properties of iodoform applied to a recent wound is to diminish the amount of primary wound secretion. It does not destroy pus microbes, but inhibits their growth.—*The Medical Review of Reviews.*

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

## THE PROBLEMS WHICH MOST PERPLEX THE SURGEONS.

BY ROSWELL PARK, A.M., M.D.

Professor of Surgery, Medical Department, University of Buffalo.

*(Concluded.)*

Certainly the appearances in epithelial cells which have been irritated by coccidia are quite analogous to those presented by cancer cells. The effect of the intracellular growth of coccidia is to produce a hypertrophy, especially of the nuclei, which often assume a volume greater than that of the original cells, only to later completely atrophy. In other words, hypertrophy precedes degeneration. This is true of the majority of cancer cells as well. It is not alone that the parasitic nature of certain bodies found in cancer cells is insisted upon by some and denied by others. It is also true that abnormal cells develop side by side with normal, that nuclei are frequently fused together, that protoplasmic filaments are compressed by cells which have not become keratinized, and that from this series of changes result nests of epidermic pearly bodies whose constitution and appearance are abnormal. This is particularly true when the transformation of young epithelium into horny cells takes place centripetally instead of centrifugally. It is very difficult to explain the appearances brought out by Soudakewitch, who fixed his tissues in osmic acid and colored the coccidia with logwood, or, after fixing by Flemming's solution, found by means of the ordinary aniline stains that they took on a color different from that of the cellular elements.

Two Russian observers, Sawtschenko and Podwyssowski, have done a large amount of work in this direction, which has partly failed of recognition because of its inaccessibility in their language. The former has found that those bodies which he considers to be sporozoa of cancer have no proper membrane, their protoplasm being limited only by the vacuoles in which it is more or less free, it often happening that it is resolved into that of surrounding cancer cells. In its adult form their parasite is re-

gular and rounded, granular in protoplasm, and more dense than that of the neoplastic cells; its nucleus plain, round, with chromatic meshes. The nucleus is decomposed into shreds, as sporulation proceeds, each of which particles becomes surrounded with protoplasm to form a new spore, which in time forsakes the cell in which it has thus been developed to invade others and spread the lesion. These characteristic appearances should be looked for at the margins of tumors where the tissue is young and the process active, instead of in the central portions where nothing is going on but degeneration. Under the influence of these recent researches of Sawtschenko the parasitic theory, at first considered so seductive and a little later so disappointing, becomes again the subject of renewed interest. By some such theory alone can miliary carcinomatosis be explained.

The common solitariness of cancer invasion in man is frequently emphasized as an argument against the parasitic theory. As the disease has been more carefully studied, it is now universally conceded that cancers may originate by multiple foci, while such conditions as general carcinomatosis and sarcomatosis, corresponding so perfectly to miliary tuberculosis, seem to establish that the disease processes not only disseminate similarly, but both have living agents for their primary causes. Not much comfort for either party can be derived from the fact that multiple and widely different neoplasms may be met with coincidentally. Thus sarcoma and carcinoma may be progressing in the same patient at the same time, while either may be connected with or be independent of syphilitic or tuberculosis disease. Nor can anything really reliable be yet learned from a source which, did it exist, would crown all others by its validity, for it must be acknowledged that attempts to inoculate cancer have been abortive in at least ninety-nine per cent. of instances. There is much reason for going over all this ground again, and so far improving upon previous experiments as to transplant tissue from the patient into the nearest possible like tissue of the animal. The old experiments made by Alibert and others were never successful, nor is it known that any surgeon has ever inoculated himself with cancer during an operation. There are but few authentic instances of transmission to the husband from cancer of the uterus. Still, about the mouth and perineum, especially where mucous surfaces lie closely in contact with each other, there is much reason to think the disease has been spread from one part to another. Nevertheless, experimental auto-inoculations have almost all failed, in spite of the fact that eroded surfaces do become infected by constant contact with discharge from cancerous sores.

Morau reported, in 1885, the inoculation of fragments from an epithelial cancer of a white mouse into ten other mice of the same kind, with formation of cancerous nodules to eight, which themselves were used for the inoculation of yet other animals, and with success. But he did more than this; he placed healthy mice in cages over a pan containing turpentine and camphor, by which they were kept free from insects and remained in perfect health. In other cages he placed healthy mice along with bedbugs taken from the cages of cancerous mice, and observed that after a few months all the animals infected with these insects were suffering from cancer.

The germ theory of cancer has assumed among certain Italian observers the form of a yeast theory, *i.e.*, it has been ascribed to the presence of blastomycetæ, and organisms of this kind certainly have been cultivated as coming from malignant tumors. Nevertheless, inoculation experiments with them have not yet been completely successful.

In a paper presented before the eleventh congress of Italian surgeons in Rome, October of last year, Roncali summed up our present knowledge with regard to the etiology of cancer briefly as follows:

1. In the cell protoplasm and the connective tissues of cancer are found bodies, not of intrinsic but of extrinsic origin.

2. These are in appearance similar to the coccidia which have been found in the cells of epitheliomata and sarcomata.

3. They are morphologically identical with blastomycetes found in animals which have been inoculated with pure cultures of organized ferments, and resist acids and alkalies as do experimental blastomycetes. They occur only in malignant growths in mankind; in such growths they are found only at the periphery where growth is still active, and not in the centre where degeneration has taken place. They are situated either in the cell protoplasm or between the fibres, rarely in the nuclei. They stain in the ordinary fashion, and can often be obtained from tumors both in man and in animals, and can be grown in pure culture. When these cultivated products are inoculated they force themselves into the cells and into the fibres, producing the same appearances as in those tumors in which they are naturally found. They moreover show the reaction of cellulose, which is a proof that they are not a degenerative product. Moreover, it is known that certain blastomycetes when inoculated produce hyperplastic rather than inflammatory changes.

Nevertheless, Roncali did not consider the parasitic nature of cancer to be definitely determined. It is of interest to know that Maffuci and Sirleo had found similar bodies and formed conclusions which were in no essential respect different from those of Roncali. They were somewhat inclined, nevertheless, to suspect that the blastomycetes might be present as the result of a secondary infection rather than as a primary caustic agent.

Whatever there be to the germ theory of cancer, it meets with this additional difficulty, that it is even to day almost impossible to state just what tumors should be considered malignant and what not. The adenomata which develop so frequently in the mammæ, the ovaries, the liver, and kidneys, seems to be peculiarly liable to subsequent malignant degeneration, while the frequent recurrence of adenoma of the breast is as well known as its conversion into carcinoma. Whether this conversion is due to infection or not is another thing to be established. The dissemination of adenomatos and papillamatous masses around the inner surface of the peritoneum, or along ordinary paths, by way of the lymphatics or vessels, is another feature of malignancy which deserves further investigation. Is this dissemination by implantation, by infection, or by what? Certainly dissemination of normal epithelium is common and is not known to produce cancer. Klebs concludes that an embryonic condition of a part predisposes it to tumor formation, but that the real malignancy

of tumors is due to a modification of their cells. The mere presence of cancer cells in a part seems to stimulate the surrounding tissue to growth in an altogether inexplicable way. According to Klebs, the principal change in an epithelial cell which is becoming cancerous is hypermitosis, which itself depends upon hypernutrition. It is characteristic of malignant growths that karyokinesis becomes both exaggerated and irregular, the epithelial cells being fed by the leucocytes, while the membrane of the nucleus becomes thinner, showing the process going on within to better advantage. Characteristic also is it that metamorphosis of the nuclei and formation of new nuclei follow each other in the same cell. Klebs views the cancerous process there as going through the following stages: first, chronic irritation or active inflammation induced by mechanical, chemical or bacterial agencies; this is followed by the emigration of leucocytes and the progressive development of other cells, which have lost their faculty of normal cell reproduction because of hypermitotic activity. He suggests as a remedy to use inhibiting substances possessed of negative chemiotaxis, by which the leucocytes should be repelled and hypernutrition prevented. He thinks that possibly the toxins of erysipelas have some such power.

Williams makes what at first sight might seem a strong argument against the parasitic nature of cancer, by showing that in all other infectious lesions, say among the infectious granulomata, there is an identity of structure and arrangement always visible, whereas in cancer of different organs or tissues the widest differences of microscopic appearances are met with. This argument can be offset, however, by another still stronger, to the effect that in true carcinoma at least, no new cells are introduced nor new tissues formed, save in the sense of being a reduplication of those already existent. On the other hand, in sarcoma there is an abnormal type of cell met with which has no business among the healthy cells of the body any more than has a giant cell containing tubercle bacilli. If, therefore, his argument is good in one way, it loses its force in the other direction.

The other side of this question is that which takes no note of parasites, considering the bodies or particles regarded as such by some to be new cell regenerations or artefacts, or else, if germs, as present only by accident. The evolutionist's view of cancer is not necessarily that of the comparative pathologist, though the latter may hold to the former's notions in this regard. My friend, Dr. Woods Hutchinson, our professor of this department, would summarize it about as follows: The evolutionary view of cancer began unconsciously in the famous theory of Conheim's "rests" or "*Schlummer-zellen; i.e.*, little islands or foci of cells, embedded in the adult tissues, which have retained a more primitive or unspecialized character, with its accompanying powers of independent growth. Gradually, however, as the individuality and independence of the component cells of the body became more adequately grasped, pathologists began to realize that it was not necessary to imagine the presence of any undeveloped or embryonic cells, but that any adult cell had the power of relapsing to the primitive condition and initiating the neoplastic process. In fact, cancer, like all other neoplasms and the pro-

cesses of repair, came to be regarded as a reversion. That individual cells of all descriptions possess reproductive powers is clearly shown by the rapid multiplication of, for instance, the muscular fibres of the uterus during pregnancy, or the heart in hypertrophy, the lymphatics in anæmia, or the connective-tissue corpuscles in the healing of wounds. The reproductive processes from a biologic standpoint may be divided, according to their results, into, first, those in which the product is perfect, the daughter cells in every respect the equals of the parent cells; and, second, those in which this result falls short, the daughter cells being inferior in rank or vitality to the parent cells. Each of these is again divided into two —those whose products are useful to the body as a whole, and those which are not. So that we have four great processes of cell-breeding going on: (1) Those in which the new cells are perfect (true to type) and of utility to the organism, such as genuine hypertrophy, leucocytosis, etc. (2) Those in which the new cells "breed true," but are of no utility to the organism, as the benign tumors. (3) Those in which the new cells are imperfect, but of value to the body, as in scar tissue. (4) Those in which the resulting cells are of lower grade or vitality, and of no utility to the organism, as in sarcoma and carcinoma.

In fact, cancer is regarded as an abortive attempt of gland epithelium to reproduce itself, *i.e.*, a parody upon gland tissue. Its "sin," its essential pathologic character, lies in the fact that its cells breed with an utter disregard of the welfare of the body as a whole. Its danger obtains in that their offspring are so immature and degenerate as sooner or later surely to break down, decay, and poison the lymph current. Sarcoma is a similar process on the part of some mesoblastic tissue cells. Supposing this statement of the nature of cancer growth accepted, can evolutionary pathology offer any explanation for the setting up of this process in any particular group of cells? The evolutionist believes that it can. The one factor which is universally admitted as predisposing to cancer is senility. It is emphatically a disease of middle or old age.

Just as soon as the food supply begins to be cut off from the peripheral organs and tissues, the liability to this process is immensely increased. The same thing will be found to be true of the organs most commonly attacked. In a large majority of cases these will be found to be either functionally senile or ancestrally either in a condition of progressive atrophy or of marked instability. As instances of the first class are the mammary glands and uterus, which after the failure or disappearance of their function become the site of nearly eighty per cent. of all cases of cancer in the female. As an instance in which both predisposing factors coexist, we have the lips and tongue, in which both the atrophic changes consequent upon the loss of the teeth and "border-line" character of the epithelium, poised between mucous and cutaneous possibilities, as it were, unite to render its cancer record next in darkness. For ancestral instability few localities can compare with the pylorus, the old gizzard region, and here again we have a most frequent site of carcinoma. All of these facts seem dependent upon one common biologic law, and that is that lowered nutrition, whether individual or ancestral, means increased liability to cancerous change; that just as soon as any organ or tissue finds

itself being slowly cut off from its nutritive supplies, it is apt to begin breeding on its own account, like plants running to seed in poor soil, in a desperate endeavor to hold their own—in short, that cancer is literally a "rebellion of the cells," as Jonathan Hutchinson has termed it, and, like many another rebellion, is chiefly provoked by starvation and want.

It will be seen, then, that the problem of the nature of cancer and of its cure is a most complete one, and must be studied from many sides. Permit me to indicate in some degree, and yet at present in a purely suggestive way, how we may profitably approach it.

First of all from the statistical side; this must include a careful history of each case, including that of the family. One of the difficulties met right here is that of getting an accurate or reliable family history. The influence of alleged injuries or previous inflammation of the part involved must be carefully weighed. We need to make out especially whether only a cancerous diathesis can be inherited, or only the active disease, or both; for instance, a woman aged forty-five develops a cancer—is her daughter of twenty years of age any more liable than any other girl, or not?

We need next to study it by localities, especially those of reasonably fixed proportions, as in the rural districts, in order to know whether it is really or only apparently on the increase. Moreover, it should be established, if possible, whether the numerical increase is due solely to more accurate diagnosis or has an actual basis of reality. The question of so-called cancer houses must be carefully studied, and positive evidence secured. In such instances there must be a careful scrutiny of evidence to show whether this is due to anything more than mere coincidence.

Next we should determine in what race and under what social conditions the disease is most prevalent. This will also necessarily bring up the question of dietetic habits. Is it more prevalent, for instance, among brain workers or other wage earners, among vegetarians or meat eaters?

A study of localities must comprise also an estimation of the physical environment—what the climatic conditions, what the geological formation, what especially the drinking-water supply. Not that this is so important for a single small locality; but if it be shown that where the disease is prevalent similar physical conditions exist, it means a great deal accomplished toward the final explanation for which we seek.

Besides the statistical study of the disease and the external conditions surrounding cancer patients, the problem must also be attacked by a careful laboratory study of fluids and tissues. First, to establish whether the disease is primarily local or systemic. Such a study is, of course, inseparable from the other examinations to be immediately spoken of. Excretions, especially the renal, must be carefully investigated; among other reasons, to ascertain whether the diminution of urea usually noted in these cases is to be regarded as among their causative or consequential features. The blood must be studied with the spectroscope as well as by all the other modern means of examining this fluid. Its hæmoglobin and other physical constituents must be carefully estimated, and its corpuscles frequently examined. The presence of sugar or of peptone in the blood must also be as frequently determined. Then the tissues of the tumor

itself must be carefully investigated, chemically, histologically, and bacteriologically. The whole question of inoculability of cancer fragments must be again gone over most carefully, with particular effort to imitate natural and original conditions as nearly as possible. If cancer really be a parasitic disease, it is only a question of time when the parasite may be cultivated in pure culture and inoculated with success. It does not follow necessarily that any of the culture media now in use will suffice for this purpose; to settle this question we must learn how to cultivate sporozoa and all the other reputed parasitic growths outside of the body, and at first without any reference to those whose agency in this direction we suspect.

Finally, the problem must be attacked also from the side of comparative pathology, *i.e.*, from the evolutionist's and embryologist's standpoint. To this effect we must begin with the lowest forms of life, and determine the causes which operate to produce neoplasms in them. We must begin even lower down in the vegetable kingdom than those trees which produce tumors (xylomata) as the result of climatic conditions or parasitic vegetables or insects. We must then look upward along the scale, in order to determine whether tumors, including cancers, are entitled to be regarded as reversions to earlier and simpler cell forms, or simpler types of cell arrangement, or whether it can be shown that they never assume malignant characteristics save when provoked thereto by the irritation of parasites.

All of this means not merely a painstaking and almost discouraging task from the outset, but it means more than can be accomplished by any individual working alone. It requires the collective efforts of numerous men versed in all the branches of biological study, and possessed of such training in logic as shall permit of no false deductions; it is, in other words, an enormous task, but not necessarily a hopeless one. If any enquiry into that which affects man's health and welfare deserves to be undertaken by the State or by the government at large, it certainly is this. I am far from making light of the studies into which the general government has entered regarding diseases of plants and animals, the establishment of bureaus of animal industry, the detection of trichinosis, etc., by all of which great benefit has accrued to our people generally and the spread of disease been notably limited. Nor would I discourage in any sense the publication of a State's report concerning the mineralogy, geology and natural history of its territory, by which knowledge of greatest importance is collected only to be suitably distributed. But I claim that we have in this matter of cancer to deal with a disease of horrible nature, of almost inevitable fatality, of common occurrence, which is certainly on the increase, and that at present we are helpless to combat it as we ought. The people naturally look to us both for explanation and for relief; we do the best we can, but this is often very little. If the lives of our cattle are of value, how much more so the lives of our citizens. In what more humane or, from the merely financial aspect, in what more satisfactory work could a government engage than by the employment of experts competent for this work, endeavoring, no matter how long it may take, to settle this problem? When the real cause or

causes of cancer are known and understood, then, and not until then, can a rational, early, non-operative and successful treatment be applied.

It would hardly be fair to dismiss this most gloomy and unpromising of all the problems which present themselves to us, without asking, in conclusion, whether any measure, drugs or otherwise, can be regarded as either certain or having any efficacy as against this dread disease? To this, first of all, I would say that in a great majority of cases cancer appears to us as a local affection, which, could it be reached early enough and attacked radically enough, might be extirpated. There is no question but what early and extensive operations in select cases give permanent relief. To bring about this happy result, however, requires the lucky coincidence by which an intelligent patient goes early to an intelligent physician, and has his or her trouble recognised at a time when sweeping operation can be made with prospect of success. It requires also that the disease shall be located in some accessible part of the body, in order both that diagnosis may be more exact and operation justifiable—except those trifling growths upon the surface which may be removed by caustic pastes, if one prefers such a course. The treatment by cancer pastes, especially the removal of large masses by this means, is alike unscientific, barbarous and damnable. It bespeaks the meeting of two cowards—the patient who is afraid of the knife, and the pseudo-physician who is afraid to use it. Could the real truth be known about institutions where this method is practised as a specialty, it would be far more discreditable both to intelligence and to the honesty of those who manage them than is generally appreciated.

But what would be said of operations in hopeless cases? I maintain that one has a right, and a duty to the patient as well, to operate in absolutely hopeless cases for either one or more of the four following reasons, providing the patient willingly consent. These are: (1) The relief of pain; (2) the avoidance of constant hemorrhage; (3) the affording of a temporary respite, and (4) the removal of foul sloughing growths, which are an offence alike to patient and family. In cases coming under one of these heads, the propriety of an operation may be submitted to the judgment of intelligent people, and to the unintelligent the choice of that which one may think well to advise.

A study of the causes of cancer being so inseparable from a discussion of the cell doctrine, one cannot but feel that if there be drugs which influence cell nutrition and cell activity, it is among them that we must look for internal remedies which may have a palliative or curative effect. First among these I place the time-honored remedy, arsenic, which, so far as I know, can vie with one of the latest aspirants to honor, namely, nuclein, for which we shall be ever deeply indebted to Vaughan and his colleagues in the University of Michigan—these being the two remedies which more than any others possess these properties. We certainly lack exact studies demonstrating their power in this direction, but this is another of the investigations to be taken up when this ideal research laboratory, at which I have hinted, is formally organized. It is difficult to say positively whether any true cancer has ever disappeared completely under the influence of either of these remedies. Nevertheless, I have personally seen remarkable retrocession of large and bulky tumors after the

use of arsenic internally, and most encouraging reports have of late come from those who have been using nuclein for this purpose. Still, it is well known that spontaneous resolution of tumors is believed in by not a few men of greatest eminence, while for myself personally its possibility seems to have been clearly demonstrated in more than one case under my observation. Certain it is, however, that in some instances one must allow this spontaneous retrocession to have occurred, or ascribe the wonderful change to the influence of certain drugs. For my own part, also, I have such faith in the virtues of arsenic that I prefer to keep all my patients more or less steadily under the influence of the drug in some form for months after operation, while it has seemed to me that I have obtained the best results by using a combination of arsenic, gold and mercury, in connection with the three haloid elements, chlorine, iodine and bromine. Whether the benefit which in my observations of this compound has really occurred is due to the influence of one or more of its components upon cell activity, or to the fact that the combination certainly serves as an ideal internal antiseptic, I will not attempt to say. At all events, there is more rapid restoration or hæmoglobin, disappearance of the anæmia due to poikilocytosis, as well as of the leucocytosis which is a feature of the cancerous cachexia, than I have known of after using any other drug.

Lastly, without stopping to mention any of the other drugs recently or in time past lauded for this purpose, all of which have so far proved disappointing, I would only mention the modern treatment of cancer by the use of toxins of erysipelas. Having experimented diligently with the toxins and without other effect save to prove their general inefficacy, I am compelled to say that in most respects the treatment has proved a disappointment, the results in most of the cases under my observation having been negative; while for every instance in which more or less benefit has resulted, I could bring two or three to bear in which positive injury has resulted. It may be, however, that we are on the right track in this matter or near it, and need mainly to enlarge our observation and still further use our reason.

---

Hysterical Spasm of the Diaphragm was the diagnosis made in a girl, ten years of age, presented to the Vienna Medical Club by Karl Berdach. The patient had for twelve days uttered a sound resembling the word "so" at intervals of less than a minute. The affection first appeared after the girl had been scolded. The laryngoscopic examination was negative. The author was acquainted with only one similar case, that of Seeligmuller. Kassowitz does not think that these cases, which were formerly classed with chorea magna, and later were called "chorea laryngis," are so very rare. As regards prognosis, these attacks generally cease of their own accord after the occurrence of some extraordinary incident; hypnotic suggestion might also possibly be of service.—*Pediatrics.*

# MEDICINE.

IN CHARGE OF
N. A. POWELL, M.D.,
Professor of Medical Jurisprudence and Lecturer on Clinical Surgery, Trinity Medical College ; Surgeon to the Hospital for Sick Children, and to the Extern Department Toronto General Hospital ; Professor of Surgery, Ontario Medical College for Women. 167 College St. ; and
WILLIAM BRITTON, M.D., 17 Isabella Street.

## FIVE SUCCESSFUL CASES OF GENERAL SUPPURATIVE PERITONITIS TREATED BY A NEW METHOD.

BY J. M. T. FINNEY, M.D., ASSOCIATE PROFESSOR OF SURGERY, THE JOHNS HOPKINS UNIVERSITY.

Recovery following laparotomy for purulent peritonitis is unfortunately of sufficient rarity to excite interest whenever it occurs. My object in making this report to the Society is two-fold; first, to record five successful cases of laparotomy for general suppurative peritonitis, all treated by the same method; and second, to describe briefly the method itself. The principle involved is not a new one; only in the manner of carrying it out is there any originality claimed.

Since the appearance in 1877 of the classical work of Wegner, and later that of Grawitz and others, it has been known that the healthy peritoneum is capable of disposing of a considerable amount of infectious material. J. G. Clark, in a recent article, reviews the literature of the subject, and gives the conclusions reached by the experimenters in this direction. All agree that the peritoneum is able under favorable conditions to take up a relatively large amount of infectious material and dispose of it effectually. These observers were dealing with a more or less healthy peritoneum. On opening the abdomen of a patient suffering from general suppurative peritonitis, however, we have very different conditions with which to deal. The observations of Pawlowsky would indicate that the lymph channels leading from the peritoneal cavity are choked with infectious bacteria and inflammatory products of purulent peritonitis, and that thus the efficiency of the peritoneum would be greatly impaired. Our observations clinically seemed hardly to bear this out.

The question that suggested itself to our mind was this, whether or not the peritoneum, even under these most favorable conditions, still retained its absorptive power. It seemed to us, from our experience in operating upon such cases by the methods heretofore employed, that they were inadequate and did not remove a sufficient quantity of the exudate, but left the peritoneum little better off than before. With this idea in mind we devised a plan of treatment which, so far as we know, has not been employed elsewhere.

The steps of the operation are as follows: Make a sufficiently long incision to admit of easy access to all parts of the peritoneal cavity. Quickly withdraw the coils of small intestine from the peritoneal cavity, beginning with the worst coils first. Remove all, or as much as is necessary, of the small intestine and place it outside the abdomen, covered with warm gauze or towels, thus practically disemboweling the patient for the time being. Then thoroughly and systematically wipe out the peritoneal cavity with large pledgets of gauze wrung out of hot salt solution, paying particular attention to the pelvic portion. In some cases it may be well, in addition, to flush out the cavity with warm salt solution, but this is rarely necessary.

Next the small intestine should be systematically examined loop by loop while still outside the abdomen, and rendered microscopically clean by wiping with gauze compresses wrung out of hot salt solution. It is necessary to wipe with considerable force at times, in order to remove adherent flakes of partly organized lymph. It should be done thoroughly and conscientiously, however, as upon this depends, we believe, in great measure, the success of the operation. It facilitates the cleansing process, as well as lessens the shock of the operation, if the wiping of the intestinal coils is carried on under a constant irrigation of warm salt solution.

After being cleansed microscopically of all foreign material, pus, feces, lymph, etc., the intestine should be replaced in the abdomen—the worst or sutured coil being the last, or most superficial, in order that it may be the better drained by being packed about with gauze, if necessary.

The abdominal wound is then tightly closed, leaving just room enough between two sutures for the gauze drain. If there are any evidences of distension or pain the abdomen should have the Paquelin cautery thoroughly applied, and the bowels moved early by calomel in broken doses, followed by salts and a turpentine enema.

It is not claimed for this method that it will cure every case of general suppurative peritonitis. We believe, however, that a larger percentage of cases will recover after this method than any other with which we are familiar.

To insure success with any method it is essential that the operation should be performed within a few hours after the perforation has taken place. This is well brought out in the very interesting series of experiments on dogs made for me by Messrs. Elting and Calvert of the Johns Hopkins Medical School, a report of which is subjoined.

Five cases have been operated upon by this method up to date, all of which have recovered. The first case, a case of perforating typhoid ulcer, has already been published, and hence only a very brief abstract of the history will be given here.

Case I.—Male, aged 47, on about eighth day of mild attack of typhoid developed symptoms of perforation. Entered hospital 14 hours later and was operated upon immediately. Peritoneum everywhere intensely congested, roughened and dull, and covered with flakes of plastic lymph. Considerable amount of turbid purulent fluid in abdominal cavity. Perforation in ilium about 14 inches from ileo-cæcal valve. Fecal matter exuding from opening. Peritoneum cleansed in the manner described, gauze drainage. Recovery.

CASE II.—G. W., a male, aged 20. Saw patient for the first time, November 24th, 1896, in consultation with Dr. Barringer, in Charlottesville, Va. Patient gave history of four previous mild attacks of appendicitis, from which he had promptly recovered. The night before he had eaten very heartily of apples. He was awakened about 3 a.m. with severe abdominal pain, cramp-like in character. At about 6 a.m. Dr. Barringer was called. He stated that at this time, three hours after the beginning of the attack, the patient presented the classical symptoms of peritonitis. When I saw him, 24 hours later, he had a temperature of 102° and a pulse of over 100, and from the first had suffered intense pain, which was controlled only by morphia hypodermically. He had had nausea and vomitting all day. Examination of the abdomen showed slight distension and great rigidity of the abdominal muscles. A slight tumefaction could be made out just to the inner side of the anterior superior spine of the ilium on the right side. Tenderness very marked. Immediate operation advised and agreed to. Incision 5 inches long in right linea semilunaris. On opening the peritoneal cavity the intestinal coils in the right lower quadrant of the abdomen were found to be congested and dull and covered with flakes of adherent lymph. Elsewhere the intestinal coils were found to be congested, but not otherwise much changed in appearance. The pus, of which there was perhaps 200 cc., was not walled off, but everywhere present in pockets between the adherent intestinal coils. The appendix was readily found. It was closely adherent to the pelvic brim on the one side and the cæcum on the other. Its distal end was swollen and distended to the size of my thumb, perforated and gangrenous over an area about as large as a five-cent piece. Appendix was ligated and excised, and stump covered with peritoneal cuff and suture. The peritoneum was treated in the manner above described. Recovery.

CASE III.—This patient was seen first on December 14th, 1896. His history is in brief as follows: R. S., male, aged 33 years. Has had no previous attack. The night before he was taken sick he attended a banquet and ate heartily of solid indigestible food. He was attacked with severe abdominal pain about 3 o'clock the next afternoon. The pain at first was general and cramp-like; nausea and light vomiting during the night. Morphia was necessary to relieve him. The next day he was unable to get up. Toward evening his physician gave him a cathartic, after which the bowels moved 8 or 10 times in quick succession. The next morning the pain had shifted to the right side and was severe. He received a hypodermic of morphia and got on fairly well until about 6 p.m., about 60 hours after the onset of the attack, when he was taken with a sudden severe pain in the lower right side of the abdomen. The pain for a time was excruciating at the base of the penis. Vesical and rectal tenesmus marked. When I saw him, about 4 hours later, in consultation with Dr. Reiche, he had a temperature of 105° and pulse of 150, profoundly collapsed. I have never seen such a hard and retracted abdomen as he presented. His condition appeared grave. Immediate operation advised and consented to.

Incision about 5 inches long, in right linea semilunaris. On opening abdomen the intestinal coils were found not to be distended but consider-

ably congested. Beginning in the right lower quadrant there was found a considerable amount of thin pus containing flakes of lymph. This condition extended over into the left side, down into the pelvis and up into the hypograstic region. The appendix was found to be gangrenous and perforated, and was removed. The toilet of the peritoneum was made in the manner already described, by disemboweling and vigorously scrubbing the parietal and visceral peritoneum until microscopically clean. The intestinal coils were then replaced, a gauze drain inserted, and the abdominal wound closed except a small opening for the drain. He made an uninterrupted recovery.

Case IV.—M. B, boy, aged 10. Operation by Dr. J. C. Bloodgood, January 7, 1897. Five days before admission to the hospital was struck in the abdomen by the fist of a playmate. Next day felt severe pain in the right iliac region. This progressively increased for three days, when vomiting began and the pain became general. Two days later was brought to the hospital, when his condition was found to be in brief as follows: Temperature 101°, pulse 128 and fairly good. Slight abdominal distension. Muscular spasm marked on right side, present but less marked on the left. General abdominal tenderness. Under ether a definite tumefaction could be made out in the region of the right kidney. This proved to be an abscess behind the cæcum, extending from the iliac fossa below to the liver above, and in this cavity was the diseased appendix. There was found no walling off of this from the general peritoneal cavity. The entire pelvis was filled with yellow pus and all the intestinal coils were covered with flakes of fibrin. The stomach and spleen were not seen, but the surface of the liver looked exactly as if it had been covered with yellowish-white paint. The appendix was removed and the entire abdominal cavity thoroughly wiped out with gauze pledgets wrung out of salt solution. The exudate was scrubbed off the liver's surface, after which it looked simply congested. A gauze drain was inserted and the abdominal wound partly closed. He made an uninterrupted recovery. Cultures and cover-slips from the peritoneum showed colon bacillus and a coccus (not differentiated).

Case V.—R. S. P., aged 9, a schoolboy, entered the Johns Hopkins Hospital, Feb. 26, 1897. He had always been healthy except for measles, whooping-cough and chicken-pox.

Family history good, except remote cases of tuberculosis on both sides. Just 48 hours before entering the hospital first complained of pain in abdomen. Three hours after had an attack of vomiting. Pain in abdomen was at first general, but in a few hours became localized in the right iliac and lumbar regions. After about 24 hours the pain lessened somewhat, and he sat up for a little while, but shortly after pain and vomiting returned with increased severity. A physician saw him after about 36 hours and gave him calomel in broken doses. His bowels moved twice. His condition did not improve, and by advice of his physician was brought to the hospital at 8 p.m., 48 hours after the onset of the attack. His condition then was as follows: Face flushed and anxious. Pulse 126; temperature 102.8°; res. 56, and entirely thoracic; abdomen generally distended and tender, especially in right iliac fossa, where the

tenderness is extreme, and muscle spasm very marked. Pain is most marked here also. Liver and spleen not palpable. Liver dullness on right corresponds about to costal border. Percussion over right iliac and lumbar regions shows dullness; tympanitic over left side. Heart normal. Fine moist rales over bases of both lungs. No history of any similar previous attack.

*Diagnosis.*—Perforating appendicitis with beginning general peritonitis. Immediate laparotomy advised and agreed to. Ether. When thoroughly anæsthetized, a small, hard mass, somewhat movable, could be felt just over the middle of Poupart's ligament. An incision about 15 cm. long was made parallel to and over the right linea semilunaris. After exposing the peritoneum and before opening it several bubbles of gas could be seen free in the peritoneal cavity. On opening the peritoneum a considerable amount of thin, cloudy sero-purulent fluid escaped and some gas. The mass felt before was found to be the appendix with a roll of omentum adherent. The intestines, especially the cæcum, were distended and congested, and covered with flakes of fresh fibrinous exudate. The congestion was most marked in the immediate vicinity of the appendix.

The appendix itself was superficially placed and freely movable, not walled off, but had a portion of omentum adherent. It was rather long, and curled upon itself, with a constriction about the junction of its proximal and middle thirds. It contained two concretions, the larger of which was engaged tightly in the constriction, and from this point to the tip the appendix was gangrenous and softened. A small perforation was present at the distal end of the date-seed like concretion. There had been an apparent attempt of the omentum to surround the entire gangrenous end of the appendix, but it had not quite succeeded. The appendix together with the adherent omentum was ligated and excised.

Pelvis was found to be full of pus, and the peritonenm treated as above. He made a rapid and complete recovery.

Bacteriological examination of the peritoneal exudate showed the presence of streptococcus, staphylococcus, and bacillus coli communis.

NOTE.—Since reading the above article I have operated upon one additional case of general peritonitis. The patient, a young woman, was *in extremis* at the time of the operation, which was undertaken simply as a forlorn hope. This operation was secondary to one performed several days previously by another surgeon for appendicular abscess. There was found present a general peritonitis, with much plastic lymph covering the greatly distended and adherent coils of intestine. There was very little purulent fluid in the abdomen. Her pulse was very rapid and thready, and her temperature had risen several degrees. After the operation she was placed in a continuous bath, which added greatly to her comfort. The operation seemed to prolong her life, as she lived about thirty-six hours following it.

# OBSTETRICS AND GYNAECOLOGY.

IN CHARGE OF

J. ALGERNON TEMPLE, M.D., C.M., M.R.C.S., Eng.

Professor of Obstetrics and Gynæcology, Trinity Medical College; Gynæcologist Toronto General Hospital; Physician to the Burnside Lying-in Hospital. 205 Simcoe Street.

C. A. TEMPLE, M.D., C.M., F.T.C.M.,

Assistant at St. Michael's Hospital. 200 Spadina Avenue.

## THE THERAPEUTIC APPLICATION OF CHLOROFORM IN LABOR.

John N. Apshur, of Richmond (*Virginia Med. Semi-Monthly*, March 12th, 1897), says that while the administration of chloroform in labor has become almost a matter of routine, and is generally considered safe, a careful observation for many years has tended to make him question its utility in many cases, and to convince him that in some cases it actually adds to the peril, and prolongs the suffering. It should be remembered that labor is a physiological function, becoming pathological only when abnormal conditions exist, such as malformed pelves, bad positions, or deformities of the child, or when interference in behalf of the mother or child becomes necessary. Such cases belong to the domain of the surgeon, and the question of chloroform is simply the necessity for an anæsthetic. Or, again, in cases where there is danger to the mother from convulsions caused by systemic conditions. But the object of this article is not to concern itself with such cases, but with so-called normal labors. These questions naturally arise: in what case should chloroform be administered? at what stage of labor? what dangers arise? and at what stage? the best means of combating them? and, finally, *is it justifiable* to administer chloroform in natural labor progressing with satisfactory rapidity?

In order to answer these questions satisfactorily, the nature and effects of chloroform narcosis must be understood. Chloroform diminishes the excitability of the muscular system and its capacity for work. It interferes with oxidation of the blood, and thus becomes toxic to the fœtus. In addition to the cases in which surgical interference is demanded we may include cases in which the pains are nagging and exhausting, also cases of rigid os with great nervousness. As to the time of administration, it should never be given until the latter part of the second stage of labor, and should be discontinued as soon as the occiput has passed the ostium vaginæ. But the most serious question is the dangers arising from the use of chloroform. Diminution of muscular excitability renders the pain less potent, and there is greater danger of hæmorrhage due to uterine inertia. Subinvolution, with all the ills that follow in its train, is almost inevitable. Not only so, but labor may be almost suspended,

making an instrumental labor a necessity. The interference with the oxidation of the blood without doubt increases the number of still-births. Nor are these the only dangers. Though few deaths are reported from chloroform in obstetric practice, yet undoubtedly many deaths occurring within forty-eight hours after delivery and reported as heart-clot, etc., may be due to the depression following the administration of chloroform. In cases where the uterine contractions persist, and the woman holds her breath to more efficiently "bear down," she is in a favorable condition for the occurrence of epileptiform syncope if chloroform is being administered. Without exception, whenever chloroform is used, a full dose of ergot should be given as soon as the head is delivered. It is also well to give ten grains of quinine at the beginning of the second stage of labor. Belladonna or nitroglycerine may also be used. A hypodermic injection of atropine (gr. 1-120), or sulphate of strychnia (gr. 1-60), will add to the safety of the patient. In view of the dangers above mentioned, it is urged that chloroform should be placed upon the same platform as other drugs; never to be given as a routine practice; or, in response to the pleadings of the patient, and simply to diminish pain, but only when the indication in the case imperatively demands it.

---

## A SERIES OF COMPLICATED LABORS; SHOULDER PRESENTATION; EXPULSION OF CHILD WITH HEAD DOUBLED UPON TRUNK.

Benjamin Edson (*Med. Council*, Phila., Feb., 1897) says that, as a rule, complications in labor result from contracted or distorted pelves, with small birth-canals and a large fœtus, but an unusually large pelvis may cause complications as well. The case of Mrs. C., of Brooklyn, illustrates this. She is twenty-four years old, weighs over 200 pounds, and has a uniformly enlarged pelvis. She was confined in 1893 for the first time, a shoulder presentation: the child was still-born. The writer does not know the particulars of this labor, as the patient was not under his care then. In 1894 Dr. Edson was called in consultation, found the patient in labor, with arm and shoulder presenting at vulva. The child was turned and delivered, breech first; child still living. In September, 1895, Dr. Edson was called; found her in labor, with several hands and feet presenting. "After duly assorting them," she was delivered of twins at about six months of utero-gestation. They lived but a day or two. In June, 1896, she was again in labor. The doctor found the membranes ruptured, and the right arm presenting; pains almost continuous and strong. An attempt to replace the arm in the knee-chest position failed. An assistant was sent for, with the intention of giving chloroform. In the meantime, with the patient on her back, the doctor "balanced the child above the mother's pelvis." The pains became violent, the shoulder progressed rapidly, the head doubled upon the left shoulder and chest, and head and chest were delivered *en masse*, the breech following. The child weighed ten and one-half pounds. Both mother and child did well.

It is hardly necessary to say that the mother's pelvis was spacious. Her abdomen was extremely pendulous, extending, when in a sitting position, beyond and below her knees. Most writers admit the possibility of such a mode of delivery only when the child is small or immature and the birth-canal unusually large. In this case the child was at full term and well developed, was born alive and is still living.

## UNUSUAL CASE IN MIDWIFERY PRACTICE.

Bernard Loughrey, of Melbourne (*Intercolonial Med. Jour.*, of Australasia, Dec., 1896), reports a case of labor, interesting because of the unususal number of complications.

The patient was thirty-two years old, had had five children and two miscarriages, had been curetted after each miscarriage. In September last, when seven months pregnant, she was taken with severe hæmorrhages, coming on without warning; these persisted, at intervals for two days, when labor pains commenced, and Dr. Loughrey was called. On examination, he found the cervix partially dilated, and a complete placenta prævia, which was detached from the os for a short distance; the pains frequent but ineffectual. For over an hour it was impossible to separate the placenta sufficiently to rupture the membranes. But at length one side was detached, and the membranes ruptured. A breech presentation was delivered as rapidly as possible, the child being livid and apparently lifeless. After twenty minutes of artificial respiration the child was breathing well, and an attempt was made to express the remaining portion of the placenta. The uterus was unusually distended, and no impression could be made upon it. On inserting his hand in the uterus to peel off the placenta, he found another child with unruptured membranes in utero. After removing the first placenta and membranes, the second membranes were ruptured and a second child appeared, with foot and hand presentation. This was delivered alive and well, the placenta quickly following. The children, both males, were wrapped in cotton and placed near a fire, but, owing to a sudden change in temperature, both children died the next day. The uterus contracted promptly, and recovery was uneventful.

## AN UNUSUAL CASE OF TUBAL ABORTION.

J. Bland Sutton (*The Lancet*, February 13, 1897) reports a curious case of tubal abortion, which demonstrates the fact that, under certain conditions, tubal abortion can be differentiated from tubal rupture by clinical signs. A married woman, aged forty-one years, the mother of four children, was last pregnant in May, 1886. From that date she menstruated regularly until June, 1896. In that month, and in July, August and September following, the usual menstrual flow was on each occasion very scanty, merely a "slight loss." July 28th, the woman had severe pain in the lower part of her abdomen, lasting three hours. August 14th a sim-

ilar attack occurred. September 15th she again suffered great pain, which lasted five days. The pain diminished in severity, but did not wholly disappear, and she applied at the Chelsea Hospital for Women for relief, where she was examined by Dr. Arthur Giles, who detected a swelling in the left half of her pelvis. From the history and the physical signs, he considered the case as tubal pregnancy, and very probably tubal abortion. The writer found, on examination, the left half of her pelvis occupied by a semi-solid swelling, which extended into the false pelvis, and could be felt above the brim. The cervix was patulous. The uterine cavity was three and a half inches in depth. There was slight bleeding from the uterus. October 19th cœliotomy was performed. A uniform-shaped clot, about two and a half inches in length, was found in a fold of omentum; beneath it a second clot of the same shape, but much larger, was found, and beneath this in the recto-vaginal fossa a third clot of exactly the same shape, but twice the size of the preceding, was found, and also removed. A rounded, hard body was felt in the left tube. The tube, ovary, and adjacent parts of the mesosalpinx were removed. The right tube and ovary, being normal, were not disturbed. The patient made a quick and complete recovery. The clots were all uniform in shape; the exterior of each was laminated like the blood in the wall of a sacculated aneurism or in the sac of an old hæmatocele of the tunica vaginalis testis. The central parts of the clots consisted of ordinary coagulated blood. The hard body in the tube was a "mole," which on microscopic examination in cross-sections showed many chorionic villi. The ostium abdominale of the tube was widely patent, and the ampullary wall thick, succulent and *entire*. The case was, therefore, one of "incomplete tubal abortion," but peculiar in this respect: As the blood collected and distended the tubal ampulla it firmly clotted, and was then expelled, with pain, through the tubal ostium into the recto-vaginal pouch. The "delivery," so to speak, of each clot coincided with each attack of pain, in July, August and September.

The only recorded case in any way parallel is by Noble: that of a case of tubal abortion in which the blood clots in the pelvis "were coiled up as though they had been ground through a sausage machine." This was due to a continuous slow bleeding in the tube, the clots being forced out as they formed in a sausage-shaped mass.

The shape of the clot in the diagram of the writer is exactly that assumed by the ampullary section of the fallopian tube when in the condition of hydrosalpinx.

---

POWDER FOR CORYZA: The *Therap. Gaz.* gives the following:

| | | |
|---|---|---|
| ℞. | Subnitrate of bismuth | 1 drachm. |
| | Powdered camphor | 6 grains. |
| | Finely powdered boric acid | 3 grains. |
| | Hydrochlorate of morphine | ½ grain. |
| | Hydrochlorate of cocaine | ¼ grain. |
| | Powdered benzoin | 15 grains. |

This to be snuffed up the nose.

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

## HYSTERICAL APHONIA.

BY SANGER BROWN, M.D., CHICAGO, ILL.

My apology for calling attention to a mere symptom is that hysteria presents such an endless variety of symptoms that one can hardly attempt to take them all together within the compass of one short paper. I invite attention to hysterical aphonia because, while it is not one of the most frequent symptoms of hysteria, it is one of the most conspicuous when present, and though in a large majority of the cases no very great difficulty is met with in attempting to diagnose it, yet there are cases which have baffled the general practitioner successfully for a number of years. I hope I may be excused if I briefly discuss this symptom somewhat as I would do if it were regarded as a disease, because I am accustomed to discuss medical topics in somewhat of a stereotyped way.

Hysterical aphonia has been pretty clearly recognized and described for a century at least; its etiological conditions are practically the same, of course, as are those of the disease of which it is a symptom, namely, hysteria.

In quite an extensive search of the literature of the subject, the youngest case that I have encountered was one occurring in a girl of nine, while the age of the oldest was that of a woman of seventy-four years.

In regard to the symptomatology and etiology, at least two fairly distinct types are found; first may be considered that type in which aphonia is merely an accompaniment of many other pronounced stigmata of hysteria, such as hysterical pains, hemianæsthesia, vomiting, etc., occurring either with or without any apparent exciting cause. In such cases it frequently happens that the aphonia is not entirely pure; that is, for hours together, when the other symptoms are most complained of, the patient may be unable to raise the voice above a whisper, but in the intervals may be able faintly to phonate now and then a word or syllable. The second or pure form of aphonia, however, is that in which this symptom occurs suddenly with or without an exciting cause, continues for a longer or shorter time, and constitutes the sole evidence of hysteria.

In the impure type the aphonia may be among the first symptoms to appear, or it may show itself only after symptoms have been present for weeks or even months. It may commence as a transient hoarseness, worse when the other symptoms are worse, or as hoarseness associated

with an ordinary cold; finally, complete or almost complete aphonia supervenes which may last from several days to several weeks, or even months.

In the pure type, as already stated, the aphonia usually develops suddenly, with or without exciting cause. For instance, the patient comes down to breakfast in his usual health and spirits, and finds, much to his surprise, that he cannot raise his voice above a whisper, or very rarely he may be entirely mute; or the symptom may develop suddenly as the result of a severe emotional shock. The influence of an emotional shock will vary directly with the susceptibility of the individual's nervous system at the time of receiving the shock. This point is of the utmost importance in estimating the influence of emotion in producing disturbance of any function of the nervous system.

Many of these cases recover spontaneously and even suddenly after a few weeks or months, with or without treatment; others remain uninfluenced by treatment, the symptom persisting steadily for years. To be sure, there are many mixed cases.

A great many methods have been enthusiastically put forward as successful in the treatment, more especially of the pure types above referred to, but in the last few years it has been pretty clearly demonstrated that they owed their success entirely to the influence of the suggestion with which they were accompanied; and in my opinion any method depends for its success upon the facility which it affords the patient for concentrating his efforts upon an attempt to phonate. Hypnotism has been successful in a number of instances, but not more so than the various forms of electricity, more particularly faradism, applied to the larynx, sometimes by a peculiarly shaped electrode applied internally, and at other times simply applied externally.

A method advocated by Oliver a few years ago attracted considerable attention and became known as his method, and has given excellent results. His plan was to pinch the posterior part of the arytenoid cartilages between the thumb and index finger, and thus produce an approximation of the vocal cords, at the same time vigorously shaking the larynx and calling upon the patient to make an attempt to phonate, assuring him positively of his ability to do so. At first only vowel sounds were attempted, and gradually the pressure and shaking were diminished, until the patient was able to phonate without assistance. In case any particular sound was not satisfactorily produced. the pressure and shaking were reapplied.

A third very ingenious and successful method consists in first getting the patient to cough which in nearly every case can be accomplished; having done this, then have him cough and at the same time pronounce the different vowel sounds, and thus convince him of his ability to phonate. It is probable that in all pure cases any of these methods, if applied with suitable suggestion on the part of the operator, would be successful; but in the case in which the aphonia is associated with other marked symptoms of hysteria, it is doubtful if complete and lasting success will be attained until the other symptoms have in a great measure subsided, and to this end it is often necessary to improve the patient's general health.

I will now describe some cases which fairly well illustrate the different types which I have alluded to above.

As representing the first type I will quote the case of a policeman, aged forty, of good habits, robust physique; his family and personal history are good, and he could not fairly be regarded as a man of nervous temperament. Though he received some quite severe flesh wounds in the Haymarket riot, in the main his duties have not been severe, neither have his personal or family relations been of such a nature as to cause him much anxiety. About three weeks before admission to the hospital, while travelling his beat, he felt a peculiar sensation, something like numbness, but difficult to describe to his satisfaction, commence in the radial side of the hand, extend to the thumb and index finger, and thence at times shoot up the shoulder. He continued his work until about five days prior to admission, when he suffered frequent paroxysms of severe pains in the left side and chest, accompanied by nausea and vomiting. During these attacks he could not speak above a whisper, and during the intervals he was very hoarse. Finally, when admitted he was pretty constantly and completely aphonic, though occasionally a syllable would be faintly phonated. Movement of the leg was normal, knee jerks were very lively indeed, and there was severe general jerk of the body when the patellar tendon was tapped; vision and the visual fields were normal, but there was complete absence of pain reaction to pin pricks and pinching over the entire left half of the body, including the tongue, gums, and inner surface of the cheeks, while sensation in the right half of the body was normal. Positively assured that a strong current of faradism would restore his voice and relieve his pain and vomiting, after the first application he phonated clearly and was for a time entirely relieved of the pains in the chest and nausea. After a few daily applications he said he felt entirely well, with the exception that occasionally he had slight pain through the chest and still a little numbness in the radial side of the hand. He returned to the hospital several times for treatment after resuming his duties, but in the course of two or three weeks from his admission he had entirely recovered. This, then, was a case of an impure hysterical aphonia occurring in connection with other well-marked symptoms of hysteria, without any apparent exciting cause.

The next case is that of a woman, thirty-one years of age, the wife of a professional man. She has had one healthy child, has correct habits, a good family history, and had always enjoyed excellent health up to two years ago, when a railway train upon which she was a passenger ran into a culvert while going at a high rate of speed, and was stopped so suddenly that all the seats were torn loose and bunched in the forward end of the car. The patient was quite severely bruised on the posterior aspect of the left hip and thigh, and received several slighter bruises on various parts of her person. No one was killed, or in fact more severely injured than herself, so the mental shock was only such as was incident to the sudden confusion and temporary anxiety for the welfare of her child, who was with her but sustained no injury. Almost immediately after getting out of the car she felt weak and dizzy, and vomited. The

accident occurred at 1 p.m., and a few hours later she again boarded a train without assistance and road several hours, till she reached her destination. She had in the meantime suffered intense and increasing pain in the legs, and had been able to walk only by putting forth a great effort. She slept several hours after a full dose of morphine, but when she awoke the pain in her legs was as severe as ever; she felt greatly prostrated, was unable to stand both on account of pain and weakness in the legs, and was unable to speak above a whisper. She continued in this condition for two weeks, when she was seized with severe hysterical convulsions lasting several hours, with unconsciousness and opisthotonos. It was six months before she could walk without support, and about six weeks before she could speak above a whisper. Her recovery from aphonia was not then sudden and complete; at first only a word or syllable was phonated, the remainder of her speech being whispered; then she gradually improved so that her voice only sank to a partial or complete whisper when she was tired. She had suffered many attacks of complete or partial aphonia, always associated with pain and weakness in the legs, and lasting from a few days to a few weeks, between the date of the accident and my examination several months ago. At that time she had been suffering several days from an exacerbation of symptoms like those already described, which she thought had been brought on by overwork and taking cold. For several weeks previous to this exacerbation she had been better than at any other time since the accident, was comparatively free from pain, could walk alone in the street, and her voice was comparatively clear and strong.

When examined she was in bed, complaining of pain in the legs, back, and head; of vertigo and nausea on movement, and inability to walk. She conversed entirely in whispers at first, but later, when her interest became aroused, now and then a word or two were phonated weakly and hoarsely. She said she felt no pain, and showed no signs of feeling any when pricked with a pin ever so deeply, or pinched in any part of her body. The field of vision for white was reduced to the fixation point. The knee jerks were very lively, and when the tendon was tapped the whole body responded with a violent jerk. The body was well formed and well nourished, loss of appetite and nausea notwithstanding. In bed the arms and legs could be moved voluntarily in any direction, though she declared she was entirely unable to walk, both on account of the pain and weakness. I saw this patient only once and then in consultation, and cannot say anything regarding the results of treatment, but it illustrates a type in which an impure form of aphonia is associated with very marked symptoms of hysteria developed by an exciting cause.

The next case may be regarded as illustrating the most common type of pure hysterical aphonia, not associated with any other hysterical stigmata. Miss A. A.——, aged twenty-nine, attendant in hospital for insane; nervous treatment, very competent, good general health. She had been employed several months in convalescent ward, and was not under a strain of any kind, when on rising one morning after sleeping well and feeling in her usual health, she found she could only whisper.

She declined treatment and the attack lasted five weeks without mitigation, when it suddenly and permanently disappeared, the patient having attended to her work as usual in the meantime and remained in her good general health. She had previously suffered two similar attacks at intervals of seven years, from which she had recovered spontaneously, and for which she could assign no cause.

The next case is that of a young man, aged twenty, farmer's son, intelligent, industrious, of correct habits, fond of company, and not notably nervous. His family history is good, and he has always enjoyed excellent health, rarely having even a cold. When he was eleven years of age his father called him as usual one morning to rise, but for some reason he went to sleep again, so that his father called him the second time, speaking somewhat sharply. From that moment until he entered my office, nine years later, according to his own testimony and that of his family and numerous friends and acquaintances, he had never uttered a sound of any kind; in fact, had been absolutely mute. His playmates, when he was still a child, would throw him down and tickle him, trying to make him laugh; his face on such occasions would undergo the usual contortions, but no sound was emitted. On still more careful inquiry, it appears that occasionally a very slight sound had been emitted when he was in the act of clearing his throat, but so far as I could learn he had never been heard to cough so that he could be heard more than a few feet distant, and some members of the family in which he had lived for years were positive that they never heard him utter a sound of any kind: his communications were all made by writing. His hearing was quite acute. Movement, the reflexes, the visual fields, vision, and sensation were all entirely normal.

I had a laryngoscopic examination made by my distinguished colleague, Prof. E. Fletcher Ingals, who succeeded in getting a satisfactory view of the vocal cords only after the use of cocaine; they were found to be normal in every respect, and in making the manipulations necessary to secure a satisfactory examination the patient coughed slightly. After thoroughly arousing his interest and attention by a rather minute and spirited dissertation upon the mechanism of speech (which of course he could not comprehend, but which convinced him none the less of my great skill), I assured him with as much dramatic force as I was able to assume' that I could cure him entirely by the use of electricity, and very speedily too. I then proceeded to apply a strong faradic current to the larynx, only for a few moments, by placing a disc-shaped electrode, about one and one-half inches in diameter, on each side of the organ, assuring him beforehand that after I had done this he could phonate the vowel sounds, and that as they were the basis of articulate speech, it would be necessary for him to learn to phonate them first in regaining his ability to speak. Immediately after this procedure he was able to phonate the vowel sound "e" after me; to be sure it was very weak, nevertheless distinct; whereupon I terminated the *séance*, assuring him that the victory had been won. After this I gave him a daily treatment, and the progress was very rapid. He was soon convinced that if he said "e" he could say "eat," and if he said "o" he could say "go," and so on; in

less than a week he could carry on ordinary conversation in rather a low tone of voice. He was then assured that in the course of a week more his voice would gradually strengthen, until it would finally be as strong as that of the ordinary individual, and this he found to be the case. This was six months ago, and he has continued well ever since.

This case deserves some comment on account of the youth and sex, perhaps, of the individual in whom it occurred, but more particularly on account of nine years' duration of unbroken mutism. He had seen a great many practitioners, none of whom, so far as I can learn, had made a correct diagnosis, probably because it was so difficult to get a satisfactory view of the vocal cords, and after the case had lasted two or three years without interruption a practitioner might naturally assume that it was not one of hysterical aphonia, but really, with the history of the onset that I was able to get the excellent state of general health ever since, and especially when the vocal cords were found to be entirely normal, there was no difficulty in making the diagnosis.

A somewhat careful examination of the literature has not enabled me to find a case that was anything nearly parallel to this in point of degree or duration. I found several cases of hysterical mutism which had lasted for several weeks, and one—that of a young woman of twenty—which had begun as simple aphonia and continued as such for several months, when it lapsed into a condition of mutism likewise lasting several months, and which finally recovered by suggestive treatment. In my opinion the efficacy of the treatment in my case was due entirely to suggestion.

The pathology of the disorder is, of course, the same as that of the other manifestations of hysteria. It is hypothetical, but most pathologists are substantially agreed upon the hypothesis, which is this: The parts of the cerebral cortex which normally preside over the various disordered functions become inactive, to the extent that they no longer respond to the behests of the will as before; accordingly in aphonia the cortical centres from which in health the motor impulse proceeds to the muscles concerned in phonation are no longer excited to activity by the volition of the patient.

Within the last year or two Lepine and Duval—each claims priority by several months—have elaborated a hypothesis to the effect that neurons, when in a state of functional activity or potentiality, are expanded so as to be in physiological contact with such other neurons as properly participate in any particular function. During rational sleep or hysterical paralysis they are contracted, and physiological contact is broken. This theory assumes that the neurons, which are in fact protoplasmic cells, undergo amœboid movements, and experiments have been made upon frogs which appear to demonstrate the possibility of such movements on the part of neurons.

The effect of suggestion in the treatment of hysteria according to this theory might be rationally accounted for by assuming that it enabled the patient to exert an extraordinary amount of will power, resulting in the necessary expansion and contract of the neurons concerned.

# PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF
H. B. ANDERSON, M.D., C.M.,
Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital. 241 Wellesley Street
H. C. PARSONS, M.D., 97 Bloor Street West.

## AUTO-INTOXICATION.

GUSTAV SINGER (*Wien. Med. Presse*, 1897, No. 12) discusses this question, with particular reference to tetany and skin diseases. He considers that some confusion has arisen owing to want of care in the clinical descriptions of gastric conditions, whence harmless atony of the stomach (gastroptosis) has been confounded with true dilatation (gastrectasis). He quotes the following interesting case of autotoxic tetany. The patient was a man, aged 41, who was attacked with diarrhœa and weakness after eating roast pork; three days before admission to the hospital constipation set in, and this was followed next day by typical tetany. On admission the urine contained no albumen, but indican, diacetic acid, acetone, and aromatic oxyacids; the great curvature of the stomach extended down to the umbilicus. Under treatment with calomel and purges, followed by iodoform internally, the tetany cleared up and the condition of the urine became normal. There can be no doubt that in this case the tetany resulted from the absorption of poisonous products from the intestine, and was determined by the constipation. The author is not inclined to regard the classification of chlorosis among the auto-intoxications with much favor, many cases so described really belonging to the group of secondary anæmias; still, as Meinert has shown, chlorosis is often associated with enteroptosis. With regard to skin affections, Mracek found that in a case of psoriasis the ethereal sulphates and diamines in the urine were increased, and the author, after investigating the condition of the intestine in a large number of dermatological cases, proved that all the signs of increased intestinal decomposition were present in acute and chronic urticaria, in acne, erythema, and pruritus. These conditions were best treated by an internal antiseptic, such as menthol. Kaposi has also obtained good effects in prurigo by the internal use of carbolic acid; Singer has seen two cases in children of the same family who developed prurigo whenever their digestive systems went wrong, and recovered when these were cured. It must not be forgotten, however, that the skin is only capable of developing a certain number of eruptions, and that in consequence the same lesion need not always be due to identical causes. The proof of auto-intoxication will depend mainly on examination of the urine and of the intestine. Constipation with stagnation of the intestinal contents is the commonest cause, and in cases where constipation and diarrhœa alternate, rashes may come and go. In treatment the greatest attention must be paid to diet, in order to diminish the bacterial contents of the bowel.

## GLANDULAR FEVER.

In a paper read before the Philadelphia Pediatric Society and reported in *University Medical Magazine*, June, 1897, Hamill deals very fully with this disease, reviewing the literature to date.

First described as such by Pfeiffer in 1889, the disease has not been given the prominence by medical writers, nor attracted the attention of the profession, to the extent that its importance and frequency of occurrence would warrant. Briefly, it is an acute infectious disease, occurring particularly in children from 5 to 10 years of age, attended by high fever, marked constipation, usually faucial redness, and rapid swelling, with great tenderness of the cervical lymphatic glands.

The glandular swelling occurs first on one side; usually, within twenty four hours the other side of the neck becomes affected, and at times there is more or less general glandular tenderness and swelling. The disease though attended by a good deal of depression runs a favorable course, ending in two or three weeks in recovery. Its ætiology is somewhat obscure, most observers inclining to the view that the infection atrium is by way of the fauces or upper air-passages; others, on account of the attendant constipation, think it may be an auto-intoxication by way of the gastro-intestinal canal. Early life, exposure to cold and pre-existent measles, scarlet fever, whooping cough and influenza are apparently predisposing factors. The disease is highly infectious, occurring usually in epidemics, though sporadic cases are reported.

The bacteriology of the disease has not been worked out satisfactorily. The streptococcus pyogenes has been the organism most frequently found in cases where examination has been made, though other organisms have been described; so that in the present state of our knowledge this matter must be considered to be unsettled. H. B. A.

---

## BACTERIA UTILIZED.

According to the *Brit. Med. Jour.*, a new system of sewage treatment has recently had an extensive trial at Exeter. Under the new method, not only is no attempt made to sterilize the sewage, but every effort is made to encourage the growth of micro-organisms, Briefly described, the process is as follows:

The sewage is run into a large tank, from which light and air are excluded. In this, the septic tank, the anaerobic organisms flourish, much gas is evolved, and a fine mineral sediment is precipitated. From the septic tank the sewage passes to the aerating troughs, where under the influence of light and air the aerobic bacilli do their work. The effluent from these troughs, after passing through coke filters, escapes in a highly purified condition, the dissolved and suspended impurities having been oxidized and rendered innocuous, exclusively through the agency of bacterial growth. A system very closely resembling the above has recently been undergoing an experimental trial at Sutton, under the direction of

the London County Council. Mr. Dibdin having ascertained, by passing sterilized air through sewage, that the amount of oxidation so obtained was infinitesimal, concluded that practically the whole work of oxidation and nitrification depended on the presence of micro-organisms. He succeeded in isolating an extremely active variety of Micrococcus candicans from coke-breeze filters, and conceived the idea of utilizing this in the purification of sewage. A 4-foot bed of burned ballast is prepared, and material containing the micrococcus is added. The sewage is then pumped on to the bed, where it remains for two hours, exposed to the influence of the organism. When drawn off at the end of this period the effluent is of sufficient purity, but as a further precaution it is recommended to filter it through land. Each bed is worked twice daily, long intervals being required to insure efficient aeration.

---

Maragliano's Serum in Phthisis.—Raimondi and Mascucci (*Rif. Med.*, May 5th, 1897) report the effect of this serum in five men and 10 women. Five are described as phthisis with lesion circumscribed in one or both lungs, slowly progressing disease with little or no fever; 10 had more or less extensive tuberculous broncho-pneumonia, with cavities, fever and night sweats. In the latter group five to 10 c.cm. of serum were given every five to eight days until some effect was produced (for example, lowered temperature), and then one c.cm. every day or alternate days. In the former group one c.cm. was given on alternate days. A generous diet was ordered, and phosphates of iron or calcium administered. The total quantity of serum given varied from 20 to 100 c.cm. No deleterious results of any importance followed the injections. As to the effect on the disease, no absolute cure was effected. Apparent cure or noteworthy and persistent improvement was observed in four cases, transitory benefit in six cases, no useful result in three cases. The good effects observed were diminution or cessation of the fever and night sweats, rapid improvement in strength nutrition and body weight, and disappearance or lessening of the physical signs.—*Brit. Med. Journal.*

---

In the *Deutsche Med. Wochenschrift*, No. 44, 1896, Hauser gives notes of a case of bovine heart in a child eleven months of age.

The patient at birth was weakly, but later well developed, and was the fourth child of healthy parents. At six months it developed a severe pertussis, there being as many as fifty attacks daily, attended with extreme muscular strain and a high grade of cyanosis at the height of the paroxysms.

All therapeutic measures were well-nigh useless, but in four weeks' time there was improvement in so far that the number of attacks was somewhat reduced, there being, however, always from 10 to 12 daily. About three and a-half months after the onset they recurred with increased vigor on which all known measures had no beneficial effect. Later there developed a severe and progressive anæmia, without any distinct cause to be found. Then followed digestive disturbances, loss of appetite, vomiting, obstipation and tympany. The liver was found at first

moderately and, later greatly enlarged, and appeared to be painful on pressure.

The cardiac dulness was increased about a finger's breadth toward the left. The sounds were clear. The weakness increased more and more, and about five months after the onset of the pertussis the patient died.

At autopsy the most important find was very great dilatation, with hypertrophy of both sides of the heart, the left ventricle being especially dilated. The heart was three or four times as large than the fist of the child, and when empty weighed 77 grammes. The valves were found intact, the muscle somewhat pale, but firm, papillary muscle drawn out, trabeculæ thin, endocardium of the left side thickened and white, apex of the heart rounded. The abdominal organs were much congested.

Here, then, are dilatation and hypertrophy of the heart for which none of the usual causes can be found. No congenital anomaly was present, so that the causations seems to lie in the severe pertussis attacks recurring during so long a period of time. With each paroxysm there was the marked venous congestion, which even in the intervals could not be fully overcome so as to compensate the injurious effects, and this stasis in the capillary and arterial system must have influenced the left ventricle. Further, the muscular tension seen with each paroxysm is analogous to that seen in the adult during hard manual labor and was a like cause of hypertrophy of the left side of the heart. A similar condition is brought about in the right heart by the strong compression of the lung during the attacks of coughing, and finally, after each attack, greater activity is demanded of the heart to overcome the circulatory disturbance produced during it.

---

F. R. Hagner, *Johns Hopkins Hosp. Bulletin*, June '97, reports the successful cultivation of the gonococcus from two cases of arthritis and one of tænosynovitis. In both joint cases the knee was involved, and a vaginal discharge was present; fluid obtained by aspiration and inoculated upon albuminous urine agar gave positive results, the organism giving all the reactions of the gonococcus and negative results on ordinary culture media.

The tænosynovitis in the remaining case involved the sheaths of the tibialis anticus and extensor proprius pollicis tendons. Venereal history was denied, but questionable. Cultures showed the same organism as the foregoing.

The medium used by the author is prepared as follows:

Acid urine containing .005 albumen or more should be collected and allowed to stand for twenty-four hours, no effort being made to prevent decomposition. The urine is boiled until a large albuminous precipitate is formed; it is filtered through paper, when the resulting fluid will be clear. The filtered urine is boiled, and agar-agar, peptone, beef extract and sodium chloride are added in the same proportion as in making ordinary agar.

The other steps are the same as in making ordinary agar, except that filtered albuminous urine instead of water is used throughout the prepa-

ration of the medium. It is important to see that the medium before being placed in tubes has a neutral or slightly acid reaction.

The advantages of using albuminous urine are, first, that in such urine albumens are always present, which are not coagulated by heat, and second, the albumen that is coagulated acts as a clarifying agent in the removal of the salts that usually cause the cloudiness of urine agar-agar as prepared by mixing the urine agar separately and sterilizing by discontinuous heating below the point of coagulation. It is important to have the medium very moist when inoculated.

---

S. Phillips (*Centblat fur Tuuere Med.*, Aug. 7, 1897).—Syphilis of the heart wall is not an uncommon affection. It was recognized in 1842. In the form of gumma or fibroid change it produces changes in the heart in the early years of life similar to those seen in the usual degenerations of old age, and may in slowly-developing cases lead to sudden death. The author has collected 25 cases of undoubted syphilis of the heart wall. As to the predilection for either side nothing definite can be said. The base seems to be more disposed than the apex.

Gummata of the left ventricle, however small, are a danger to life, and can, when near the apex, produce an unexpected exitus. It may clinically be suspected when an individual with syphilitic antecedents presents signs of disturbed action of the left ventricle, angina, tachycardia, syncope, or epileptiform attacks.

Angina pectoris without signs of failure of the heart can depend upon fatty degeneration; but this at the most first appears after the fiftieth year and with other concomitant clinical signs, or it may be referred to an aneurism of the root of the aorta (Broabent), or to an aneurism of the heart wall, which likewise may be the result of a local syphilitic lesion, and with or without rupture prove fatal.

In syphilitic persons, moreover, dilatation of any region of the heart may result from a specific fibroid change, and in such cases a enlargement of the heart without any otherwise appreciable cause, and without a distinct increase of the heart's power directs one's thoughts to a luetic myocarditis.

---

M. Labbé (*Revue Meus des Malad. de l'Enfance*), reports two cases of tuberculosis of the myocardium. Autopsy in each case showed a general tuberculosis. In one of these before death there was evidence of heart hypertrophy, dyspnœa, cyanosis, œdema, and præcrdial pain, with lessened quantity of urine. The anatomical change consisted of a diffuse tubercular infiltration of the heart muscle. The other case showed no signs whatever referable to the heart before death, which appears to be the rule from similar cases in literature. At autopsy was found a solitary miliary tubercle of the myocardium of pin-head size, projecting above the pericardium. Tubercle of the heart muscle is a rare disease; it occurs mostly as a secondary infection, only two cases—those of Dennue and Kroff—being on record as primary.

# NOSE AND THROAT.

IN CHARGE OF
J. MURRAY McFARLANE, M.D.,
Laryngologist to St. Michael's Hospital. 32 Carlton Street.
D. J. GIBB WISHART, B.A., M.D.C.M., L.R.C.P.L.
Professor of Laryngology, etc., Ontario Medical College for Women; Lecturer in Laryngology and Rhinology, Trinity Medical College; Rhinologist and Laryngologist to the Hospital for Sick Children, St. Michael's Hospital, and the Girl's Home; Assistant Rhinologist and Laryngologist Outdoor Department Toronto General Hospital, etc. 47 Grosvenor Street.

## SOME PRACTICAL POINTS CONCERNING DISEASES OF THE NOSE, THROAT AND EARS OF CHILDREN.

BY ROBERT CUNNINGHAM MYLES, M D.

It is in childhood that many cases of impaired hearing originate, chiefly due to nasal stenosis, suppurative rhinitis, and hypertrophy of the lymphoid tissue of the rhino-pharynx and oro-pharynx.

The nasal stenosis can be relieved by straightening the septum, removing thickenings and outgrowths from it, shrinking swollen turbinals with acids; and much relief can be afforded in suppurative rhinitis by securing free drainage and by the application of antiseptic solutions.

Nearly all specialists agree that diseased or hypertrophied states of the adenoid tissue of the vault of the pharynx are the most important pathological conditions of childhood. The objective and subjective symptoms due to disease of this tissue should be carefully noted by the family practitioner. The principal objective symptoms are the open mouth, especially during sleep, and the size of the hypertrophied mass, best ascertained by passing a trained finger behind the soft palate In many children the size can be determined by inspection through the nose, after cocainization, and the rhinoscopic mirror. The chief subjective symptoms are mouth breathing, snoring, disturbed sleep, impaired hearing, a peculiar dull voice, cough, spasm of the larynx, asthma, bronchitis, etc. Many instruments and methods of operating have been advocated. Whether general or local anæsthesia should be employed is a question frequently difficult to decide in each individual case. It has been the writer's habit, in those cases where the growth is rounded and is rather centrally situated, to thoroughly cocainize the parts with a 20 per cent. solution, and at times with crystals. This is usually accomplished by passing curved cotton applicators, saturated with the solution, up behind the soft palate, and letting them remain there for a minute or two, and also by passing cocaine on very small cotton applicators through the nose into the adenoid tissue. Then a large sheet is wrapped several times around the child from neck to feet, mummy fashion, and securely pinned from top to bottom; the child is held in the lap of some one, while the assistant, who stands behind, holds the head firmly and in a proper position. A Gottstein curette, of suitable size, well sharpened, is passed up behind the soft palate until it strikes the septum, then it is forced firmly upward against the basilar process; a quick upward, backward and downward movement of the instrument usually brings away a large mass

intact. This movement should be repeated two or three times in rapid succession, slightly inclining the curette to the sides respectively. Sometimes a pair of post-nasal forceps with large fenestra are used. After the first flow of blood is over, the index finger, which has been rendered aseptic, is passed up, and whatever small masses have been left around the choanæ and Rosenmüller's fossæ, are broken up. The whole operation is usually done in about thirty seconds. When the growth is very large and attached to an extensive surface, sometimes extending into the posterior nares and down to the oro-pharynx, I prefer to operate under a general anæsthetic; chloroform is the most agreeable to the patient and to the surgeon but ether, with its slowness and horror to the little patient, is the safest. Bromide of ethyl, nitrous oxide gas intermixed with about 10 per cent. of oxygen are excellent agents in the class of cases when the operation can be finished in thirty to fifty seconds. When operating in cases of general anæsthesia, I first use the large fenestrated forceps, adjusting them carefully around the growth before making the traction. After the large section is removed the patient's head is placed over the edge of the table with the face downward, and the blood is allowed to run out of the nose and mouth. The smaller forceps and curette are used, carefully guarded by the finger, to remove the remaining marginal and fragmentary masses. The results of the operations are as gratifying as any in the department of surgery. Nearly all of the unfavorable symptoms disappear at once, and the hearing improves rapidly and markedly.

It has been the experience of the writer that one of the simple forms of Mackenzie's tonsillotome is the best for removin gall protruding faucial tonsils, and the punch and die Rongeur forceps have been found extremely serviceable for the tonsils which are hypertrophied in their bases.

Hypertrophy of the small glands in the post pharyngeal wall, usually described as granular or follicular pharyngitis, is best relieved by some form of curette. I have found the one devised by Mayer to be the best for general use. Hypertrophy of the lingual tonsils of children occurs quite frequently in my cases. The majority of writers, I believe, assert the contrary. The writer's modification of Chappell's lingual tonsillotome has been most serviceable in removing these lymphoid masses. They usually cause cough and many disturbances about the larynx.

The general practitioner should be more alert in regard to ascertaining the exact state of the child's ear, especially in those cases where the symptoms are vague or indefinite. Several cases have come under my observation where the family physician had been treating the very young child for several weeks for irregular fever, fretfulness, profound nervous disturbances, etc, and only on rare occasions did the child place its hand on the side of the head. When the ear was examined the drum cavity appeared to be full of fluid, the membrana tympani was bulging and congested. Incision brought away a quantity of pus, and the improvement was immediate, marked and rapid. In all cases of discharge from the external auditory canal strict aseptic and antiseptic precautionary measures should be used. The best results have been obtained from a solution of bichloride of mercury 1-5000 and from a saturated solution of boric acid, which should be occasionally alternated by a small quantity of the powder.—*The New York Polyclinic.*

# PAEDIATRICS.

IN CHARGE OF
ALLEN M. BAINES, M.D., C.M.
Physician, Victoria Hospital for Sick Children; Physician, Out-door Department Toronto General Hospital. 194 Simcoe Stree , and
J. T. FOTHERINGHAM. B.A., M.B., M.D., C.M.,
Physician, St. Michael's Hospital; Physician, Outdoor Department Toronto General Hospital; Physician, Hospital for Sick Children. 39 Carlton Street.

## SOME POINTS IN THE TREATMENT OF CHILDREN'S DISEASES.

E. P. Davis (*College and Clin. Rec., 1896, xvii., 233*) gave the following points in a lecture at the Phila. Polyclinic:

Barley water is prepared by adding one tablespoonful of barley grains to one pint of scalding hot water, allowing it to stand and then straining; it is a valuable addition to the diet, exerting an astringent action on the bowel in case of diarrhœa.

Oatmeal water is prepared by the addition of one tablespoonful of oatmeal to the pint of scalding water, allowing it to stand; strained and administered it exerts a laxative action.

If the child vomits, is feverish, and has frequent stools, the milk should be stopped altogether for twenty-four to thirty-six hours and albumen water substituted.

Albumen water is prepared by adding the white of one raw egg to eight ounces of water; in addition the child should get light chicken or mutton broths or freshly extracted beef juice.

Brandy and water form a good stimulant and may be administered in ten-drop doses six or eight times a day. The administration of a dose of castor oil, guarded by some brandy to prevent griping, is of exceeding value to clean out the irritating material from the intestines. Lavage of the intestine is of first importance in intestinal infantile disorders. It is usually accomplished by the use of a number 11 or 12 soft rubber catheter and a fountain syringe with one or two quarts of warm water. The best result is obtained if the infant is placed on its abdomen across the nurse's knee, the water being at a temperature of 100° F., and a little soda or salt added to it. Great relief is obtained from the evacuation of the flatus and feces. In chronic cases some antiseptic and astringent must be added to the water, thus:

Boric acid, ½ ounce to the quart.
Creolin, 30 drops to the quart.
Sodium salicylate, 10 gr. to the quart.
Thymol, 1 part in 2,000.
Mecuric chloride, 1 part in 10,000.

The use of the solution of mercuric chloride should be followed by irrigation with warm water; this irrigation of the intestines not only removes the flatus and feces but exerts a stimulant action upon the bowel. —*Pediatrics.*

*UNDER EMINENT SCIENTIFIC CONTROL.*

# "APENTA"

## THE BEST NATURAL APERIENT WATER.

**Bottled at the Springs, Buda Pest, Hungary.**

"We know of no stronger or more favorably constituted Natural Aperient Water."

*L. Liebermann*

*Royal Councillor, M.D., Professor of Chemistry, and Director of the Royal Hungarian State Chemical Institute (Ministry of Agriculture), Buda Pest.*

***Approved by the ACADÉMIE DE MÉDECINE, PARIS.***

"The proportion of sulphate of Soda to sulphate of Magnesia is 15.432 to 24.4968 in the litre, so that this Water may be classed with the best Aperient Waters, and be pronounced one of the strongest."

PROFESSOR OSCAR LIEBREICH,
*University of Berlin ("Therap. Monatshefte").*

**"The water is constant in its composition."**

**It possesses advantages demanding the attention of therapeutists to this purgative water, and recommending it to practitioners."**

*DR. G. POUCHET,*
*Professor of Pharmacology in the Faculty of Medicine of Paris.*

*"THE CANADA MEDICAL RECORD" says:*

**"A very reliable and satisfactory Aperient."**

**"More agreeable to the palate than any we have knowledge of."**

**"An ideal purgative."**—*Practitioner.*

The *BERLINER KLINISCHE WOCHENSCHRIFT*, 22nd March, 1897, publishes a report upon some experiments that have been made under the direction of PROFESSOR GERHARDT, in his clinic at the Charité Hospital at Berlin, demonstrating the value of APENTA WATER in the treatment of obesity and its influence on change of tissue.

SOLE EXPORTERS:

*THE APOLLINARIS COMPANY, LIMITED. LONDON.*

# WYETH'S

# Elegant Pharmaceutical Goods.

## NEW PREPARATIONS.

**ELIXIR UTERINE SEDATIVE SPECIFIC.** This combination cannot but at once appeal to the intelligent practitioner as almost a specific in the treatment of the various kinds of pain incident to the diseases of the female sexual organs so varied in their character and such a drain upon the general health and strength.

Each fluidounce of this Elixir contains forty grains *Viburnum Opulus* (Cramp Bark), thirty grains *Hydrastis Canadensis* (Golden Seal), twenty grains *Piscidia Erythrina* (Jamaica Dogwood), ten grains *Anemone Pulsatilla* (Pulsatilla).

**BORACETANILE. Acetanilid and Boric Acid,** being much alike in physical properties and in antiseptic action, combine excellently in the form of a powder, which is now favorably known as a soothing, non-irritant and efficient dressing for lacerated and incised wounds, ulcers, sores, and any other injury that requires a bland but effective application. The present preparation contains these two ingredients, finely powdered, in the proportion of *twenty-five* parts of Acetanilid to *seventy-five* parts of Boric Acid.

**ANTI-RHEUMATIC TABLETS: Salicylates of Potassium and Lithium.** Each tablet represents 3½ grains of the combined salts. Effervescing Tablets of Salicylates of Potassium and Lithium, in the above proportions, are readily soluble and effervesce quickly and freely. Salicylates of Potassium and Lithium are invaluable remedies in all febrile affections inducing headache, pain in the limbs, muscles and tissues, also are particularly indicated in Lumbago, Pleurisy, Pericarditis and all muscular inflammatory conditions.

*SPECIFY WYETH'S MANUFACTURE.*

Literature and Samples of above will be furnished on application.

John Wyeth & Bro.,
Pharmaceutical Chemists,
Philadelphia, Pa.

Davis & Lawrence Co., Limited,
Sole Agents for Canada,
Montreal.

# As Sunlight is to Darkness

is the condition of the woman who has been relieved from some functional disturbance to her state before relief. Don't you know, Doctor, that there are few cases that pay the physician so well as those of women—and the Doctor that relieves one woman, lays the foundation for many more such cases—all women talk and your patient will tell her friends ASPAROLINE COMPOUND gives relief in all cases of functional disturbance—Leucorrhœa, Dysmenorrhœa, etc., and in the cases it does not cure it gives relief. We will send you enough ASPAROLINE COMPOUND—free—to treat one case.

DR. BRETON, of Lowell, Mass, says:

"I wish to inform you of the very satisfactory results obtained from my use of Asparoline. I have put it to the most crucial tests, and in every case it has done more than it was required to do. I recommend it in all cases of dysmenorrhœa."

| FORMULA. | |
|---|---|
| Parsley Seed | Grs. 30 |
| Black Haw (bark of the root) | " 60 |
| Asparagus seed | " 30 |
| Gum Guaiacum | " 30 |
| Henbane leaves | " 6 |
| Aromatics | |
| To each fluid ounce | |

Prepared solely by

HENRY K. WAMPOLE & CO.,

Pharmaceutical Chemists,

PHILADELPHIA, PA.

---

A SUCCEDANEUM FOR MORPHIA

# Antikamnia

OPPOSED TO PAIN

A CERTAINTY IN MEDICINE

DOES NOT DEPRESS THE HEART

NO DRUG HABIT INDUCED

NO TOXIC EFFECT

OUR PREPARATIONS

Antikamnia Powdered.
Antikamnia Tablets.
Antikamnia and Codeine Tablets.
Antikamnia and Quinine Tablets.
Antikamnia and Salol Tablets.
Antikamnia, Quin. and Salol Tablets.

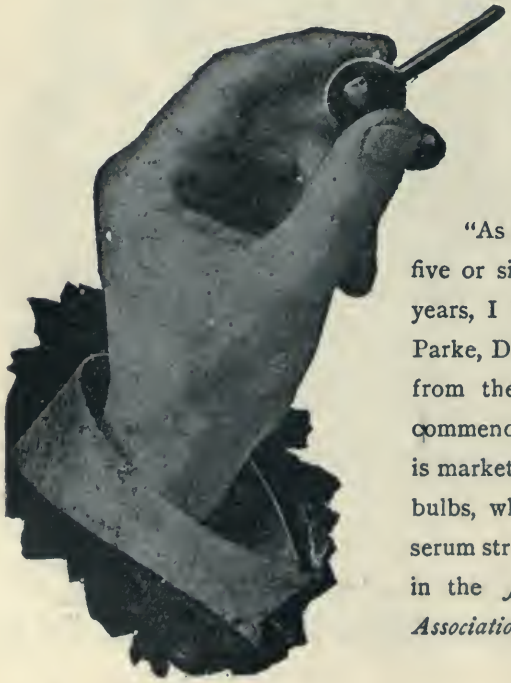
BRITISH AND COLONIAL DEPOT: 46, Holborn Viaduct, London, E. C., Eng.

Send Your Professional Card For Brochure and Samples to THE ANTIKAMNIA CHEMICAL CO., St. Louis, Mo., U. S. A.

# Every Retail Pharmacy is a Depot for Our Serums.

**If your druggist has not the Antitoxin on hand, it can be wired for to our Laboratory in Walkerville, or to the following firms who receive fresh supplies weekly:**

| | |
|---|---|
| THE S. B. CHANDLER, SON & CO., (Limited), | Toronto. |
| MESSRS. LYMAN, KNOX & CO., | Toronto. |
| THE LYMAN BROS. & CO., (Limited), | Toronto. |
| MESSRS. ARCHDALE, WILSON & CO., | Hamilton. |
| MESSRS. J. WINER & CO., | Hamilton. |
| MESSRS. KERRY, WATSON & CO., | London. |
| MESSRS. J. A. KENNEDY & CO., | London. |



## HERMETICALLY SEALED

"As to the antitoxin to use, having tried five or six different makes in the past two years, I have found that manufactured by Parke, Davis & Co. most efficacious. Apart from the potency of this brand, I must commend the ingenious manner in which it is marketed, viz., in hermetically-sealed glass bulbs, which exclude the air and keep the serum strictly aseptic."—DR. GEO. DUFFIELD, in the *Journal of the American Medical Association*, March 6th, 1897, page 446.

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* DR. J. L. DAVISON, 20 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* DR. G. P. SYLVESTER, Business Manager, 585 Church St,, Toronto.

AGENTS :—Eastern Agents, A. L. HUMMEL & Co., 100 William St., New York ; J. & A. McMILLAN, St. John, N.B.; Canadian Advertising Agency, 60 Watling St., London ; 5 Rue de la Bourse, Paris.

**The Largest Circulation of any Medical Journal in the Dominion.**

## Editorial.

### THE MEDICAL COUNCIL.

In the August number we referred to a few changes made during the last session, and we now continue in accordance with a promise then made.

In the early part of 1896 the Minister of Education prepared a bill to provide for such applicants as sought registration on credentials other than the Departmental certificate, which, inclusive of a degree in Arts, was the only portal to the study of medicine.

It had been represented to the Hon. Mr. Ross that the said qualifications, although not identical in form, were equivalent to the certificate required by the Council. Some were undergraduates in various institutions, and others, having in part failed in the Departmental Arts matriculation, requested acceptance of a supplemental certificate covering the subjects in which they had come short of passing initially. As is known, the Department recognized no supplementary work done, insisting upon a full examination before a certificate being granted, and this line was followed by the Council in order to act fully in harmony with the directing centre of Provincial education.

In addition to these there were others who tendered certificates of matriculation issued from a multitude of teaching bodies.

The proposed bill was intended to cover all such cases from the highest to the lowest ; and a change more radical still was indicated, viz.: the possibility of proceeding with the professional course of study up to and including the primary examination before matriculation, or, in other words, without any sort of guarantee of ordinary educational attainments before the completion of a large portion of the scientific course. This is so contrary in its spirit to the genius of every self-respecting institution of learning that we cannot help deploring the fact that the Government carried its prerogative to such an extremity as to coerce the Council into accepting an examination conducted piecemeal specially for matriculants in medicine, and considered by the Department as not good enough for Arts.

At the same time the Profession was forced to swallow the deferring of matriculation to the primary examination and all the other details of the bill—in other words, the Council had the choice offered of committing suicide, so far as the control of matriculation is concerned, or of submitting graciously to the gentle hand of parliament controlling the guillotine. In an interview with the governing power, lest the blade might descend farther than was anticipated, the Executive of the Council concluded to act in accordance with the "suggestion" of the Minister of Education and carry into effect what was proposed; hence, last year many clauses were inserted in the provisions for matriculation, and amongst them all we know of only one that could not be denominated an imposition, viz.: that making examination in Arts at the end of the first year equivalent to the ordinary matriculation, as required by the Council.

Political intervention in the principles that guide professional bodies may be necessary in extreme cases, but we humbly submit that there are many affairs in which Governments are, in the nature of things, more wisely qualified to interfere than in the curtailing of privileges long ago accorded to a profession whose self-management is founded on many years of special experience, and whose sole desire is the maintenance of a standard which shall be a credit to its licentiates, and at the same time fairly commensurate with the educational and financial resources of the country.

With all our regard for the Minister of Education we do hope that in the future he will see fit to allow the profession of medicine to utilize its wisdom to work out its own legitimate destiny. Its representatives occasionally make just such little mistakes as once in a while appear in the statute book; but more good will in the end be accomplished through liberty of action, guided, when urgently required, by a word of kindly advice than autocratic intervention can ever secure.

It should, however, be stated that the provisions of the proposed bill were for the purpose of "cleaning the slate" of a number of cases to which the attention of the Government had been directed, and that this was fully set forth last winter by the Hon. Mr. Ross when the petition of the Profession was presented to the Government.

Accordingly, last session the Education Committee expressed to the Council the opinion that the "slate must have been pretty well wiped," that the Council had fairly fulfilled its part of the compact, and that the time was fast approaching when resumption of its original prerogative would be in order. This advice was acted upon, and time restrictions were placed on clauses 2, 3 and 5 of matriculation requirements, as per Section I. of Annual Announcement, 1896-7. We believe 2 and 5 cease to be available in 1898, and clause 3 in 1899.

Heretofore, the work of the clinical year has been somewhat indefinitely indicated; in order to obviate confusion Sub-section 1, Section II. will be so worded that six months at least must be spent in hospitals, dispensaries or laboratories devoted to physiological or pathological research, and the remainder of the year with a licensed practitioner.

Hereafter, no ticket for lectures will be accepted unless it sets forth, not only that the holder has attended not less than 75 per cent. of the

required number of lectures, but also that such attendance has extended over at least 75 per cent. of the time allotted to such course,—a change in the right direction, because forced cramming for, say, half a session, is inconsistent with proper assimilation of such knowledge as is supposed to be imparted in twice that time.

The didactic lectures have not been increased—except in one or two particulars where the necessities of the case rendered it imperative.

Instead of twenty-five lectures and demonstrations in Pathology there will be fifty, and, in addition thereto, twenty-five in Bacteriology, together with five lectures and five demonstrations on the use of Anæsthetics.

This last innovation was badly needed—bungling nervousness in the use of chloroform or its substitutes is a sorry spectacle to behold, especially when consideration is given to the fact that responsibility of the Anæsthetist is not infrequently greater than that of the operator.

The number of clinical lectures and demonstrations has been largely increased—from sixty to one hundred in each of two sessions. This means simply a guarantee that adequate work will be demanded from all and an imposition placed upon none. From inquiries in different schools we learn that their clinics already fulfil the new requirements; their faculties have found such a course no more than necessary to fully equip the student for his examinations, which are of a high order.

Taking into consideration all the changes indicated in our last as well as in this number, the conclusion is safe that with the exception of the continuation of that *bête noir*—the fifth year—our representatives have been guided by a desire for just dealing and that the standing of the Profession is one to evoke a feeling of satisfaction and to preclude successful criticism on the part of any disposed to be captious.

---

## FATIGUE.

"If a man could feel all day like he does just after he has had his cold bath in the morning," what an enormously increased amount of happiness there would be in the world; how much greater would be the amount of work done; and how greatly would the quality of the work done be improved. It would be impossible to compute or even imagine the change in the complexion of the world to the human species if the element of fatigue could be, not eliminated, but even moderately reduced. How many of us are handicapped by "that tired feeling" which is with us a good deal of the time! Think of the sum-total of misery, agony even, which humanity suffers with each revolution of this globe, through fatigue, both mental and muscular.

The question of mental fatigue is one intimately bound up with the economical and social conditions of this *fin de siècle* age in which, happily for us, or otherwise, our lot is cast. We believe that, eventually, good will be the end of all the ill, and that the terrible strain under which civilized mankind, and especially that portion of it which inhabits this hemisphere, is living will give place to a more rational enjoyment of

those things which have been given us "richly to enjoy." With this form of weariness we shall not deal, as the roots of its cause strike deep into the commercial and social condition of our present system of existence, and the question is outside our present purpose. But muscular fatigue is a question which is of great moment to the individual as well as to the community. It is one which individuals may, to a certain extent at least, decide for themselves, irrespective of their environment. We do not mean in the matter of muscular exertion, for that will be necessary always; but in the matter of food. Is it not true that the average man eats too much? If we exclude from our observation the miserably poor, who can not secure too much food, we think that, notwithstanding the many tales we as doctors hear about "poor appetite," "no relish," "lives on nothing," etc., the fact is that people eat too much, rather than too little.

The "Hunger Cure," at Baden, had a deal of success, though the patients were allowed only about four ounces of white bread and one tumbler of water in twenty-four hours. The amount of fæculent matter they discharged was to them a constant wonder; as it is to patients with each of us, who say "There is nothing in me. I have eaten nothing for a whole day." Yet they are astonished at the amount of matter a good dose of castor-oil will bring away, even when they were certain they were "void of any such."

The *kind* of food to be taken by muscle-workers is of great importance and, if science be correct, quite different from what, according to the popular notion, is correct.

The laboring man, generally, will tell you that without lean meat in plenty he is not at his best.

Dr. Haig, says the *Codex Medicus*, has placed this subject on a scientific basis. His recent masterly work has done much to open the eyes of practitioners as to the cause of many of the ordinary diseases, which too many of us are inclined to treat with drugs on the routine plan.

He finds one chief cause of fatigue to be the increase of urea in the blood, this increase being the natural and certain result of the retrograde metamorphosis of nitrogenous substances in the tissues doing work, and the production of urea faster than it can be carried off through the kidneys. His reasoning is, that urea being an alkaline product, the greater the alkalinity of the blood the less rapidly can the urea be removed by the organs of excretion.

Why do we weary sooner in hot weather? Because with more perspiration the blood is more alkaline, and, consequently, the nitrogenous waste is more slowly eliminated by the kidneys; it accumulates in the blood and produces the sense of muscular fatigue we all know too well.

Now, we have long known that an excess of nitrogenous matter in the food results in the production of an excess of urea; so those who eat lean meat in quantities must, unless the urea be rapidly removed, suffer early from weariness. Individual liking for fresh lean meat, the pleasures of the table and fashion, have recently given an impetus to its consumption.

In the old days in our Canadian lumber camps, fat pork was practically the only animal food the men had for five and six months at a time. Yet we are told they did more work per capita, and came out in the

A
Palatable
Laxative
Acting without pain
Or Nausea

# WYETH'S

## Medicated Fruit Syrup,

The New Cathartic Aperient and Laxative.

We make many hundred cathartic formulas of pills, elixirs, syrups and fluid extracts; and for that reason, our judgment in giving preference to the MEDICATED FRUIT SYRUP, we feel is worthy of serious consideration from medical men.

The taste is so agreeable that even very young children will take it without objection; the addition of prunes and figs having been made to render the taste agreeable rather than for any decided medical effect. It is composed of Cascara, Senna, Jalap, Ipecac, Podophyllin, Rochelle Salts and Phosphate of Soda

The absence of any narcotic or anodyne in the preparation, physicians will recognize is of great moment, as many of the proprietary and empirical cathartic and laxative syrups, put up and advertised for popular use, are said to contain either or both.

It will be found specially useful and acceptable to women, whose delicate constitutions require a gentle and safe remedy during all conditions of health, as well as to children and infants, the dose being regulated to suit all ages and physical conditions; a few drops can be given safely, and in a few minutes will relieve the flatulence of very young babies, correcting the tendency of recurrence.

JOHN WYETH & BRO.,
DAVIS & LAWRENCE CO., Ltd., General Agents, Montreal.

# SYP. HYPOPHOS. CO., FELLOWS

**CONTAINS**

**The Essential Elements** of the Animal Organization—Potash and Lime;

**The Oxidizing Elements**—Iron and Maganese;

**The Tonics**—Quinine and Strychnine

**And the Vitilizing Constituent**—Phosphorus; the whole combined in the form of a Syrup, with a slight alkaline reaction.

**It differs in its effects from all Analogous Preparations**: and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

**It has gained a Wide Reputation**, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

**Its Curative Power** is largely attributable to its stimulant, tonic and nutritive properties, by means of which the energy of the system is recruited.

**Its Action is Prompt**: It stimulates the appetite and the digestion, it promotes assimiliation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy and removes depression and melancholy; *hence the preparation is of great value in the treatment of nervous and mental affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

When prescribing the Syrup please write, "Syr. Hypophos. FELLOWS." As a further precaution it is advisable to order in original bottles.

For Sale by all Druggists,

DAVIS & LAWRENCE CO. (Ltd.), Wholesale Agents, Montreal.

# BOVRIL . . .

## UNION IS STRENGTH.

And the union of the Best Beef Extracts with the Albumen and Fibrine produces BOVRIL, which is therefore infinitely more Strengthening and Nourishing than ordinary Meat Extracts or Home Made Beef Tea, in which these Flesh-forming and Muscle-making properties are almost entirely absent.

This Albumen and Fibrine is obtained by a patented process, by which the lean of the finest Beef is in a sense mechanically digested or reduced to so fine a state of subdivisions that it is at once assimilated by the system, with the smallest possible expenditure of Vital energy; and herein lies the superiority of

## BOVRIL

Sold by all First-Class Druggists and Grocers.

**BOVRIL, Limited,** 27 St. Peter Street, MONTREAL.

spring in better condition than now, when the custom is to consume beef and mutton almost to the exclusion of fat pork; and cake and pie are on the table three times a day.

A couple of weeks ago we enquired of an Indian, who was rowing us for 'lunge in the Georgian Bay, how the board was in the camp he worked in last winter. "Good board," he said, "pie every time." "Plenty beef." Much pork, we asked. "No, not much pork."

Dr. Haig's scientific deduction is that a vegetable diet ought to be the best on which to do manual labor, and this should be the case, especially during prolonged exertion. He cites a case of a long distance walking competition in which, though the number of contestants was large, the winners were all vegetarians.

We remember reading many years ago in *Carpenter* that a properly composed vegetable diet was entirely satisfactory for laboring men. Are we coming back, as science advances, to the ideas of those giants in the medical world who, by careful observation and wonderful power of combination, regulated the health of our grandparents and great grandparents some decades ago?

## GUAIACOL IN PUERPERAL ECLAMPSIA.

Dr. J. F. R. Appleby *(Boston Med. and Surg. Jour., North Amer. Pract.)*, says: When guaiacol is poured upon the abdomen, it is rapidly absorbed. Its physiological effect is to cause rapid and marked lessening of arterial blood-pressure, lowering of temperature and free diaphoresis. These physiological effects first led me to use it in a case of *nephritis attended with slight convulsions* and a full, hard pulse. Patient, adult male. Twenty-five drops were poured upon the abdomen, and rubbed in with the tips of the fingers. Relief was certainly marked.

Next I used guaiacol in two cases of *puerperal eclampsia*, with surprising and happy results. Primparas. In the first, labor was progressing favorably; dilation had been accomplished; occiput had begun to descend, when convulsions came on, becoming more profound with each recurring seizure. As soon as practicable, chloroform was administered, and a large male child was delivered with forceps. On the anæsthetic wearing off, convulsions returned, whereupon I poured forty or fifty drops of guaiacol, (case too urgent to take time to count drops) upon the abdomen and gently rubbed them in, as in the preceding case. In a few minutes pulse became soft, free diaphoresis set in, and convulsions died away.

Second patient had been delivered by a midwife. Baby and placenta had come away, when convulsions set in. The patient was enormously swollen over the whole body; pulse was full, hard and tumultuous. Convulsions were almost continuous. They were as powerful, if not more powerful, than any I have seen. It looked like a hopeless case. I used forty or fifty drops of guaiacol and gave a hypodermic injection of one-tenth of a grain of sulphate of morphia. In less than an hour the patient was sleeping quietly, and no more convulsions followed.

Both cases had albuminuria and were much swollen, which symptoms demanded treatment for a few days. Boys are now enjoying ordinary health.

For guaiacol there may be claimed certainty of action, speedy relief of urgent symptoms, and ease of application, which renders it perhaps more desirable and less objectionable than any one of the remedies heretofore used in eclampsia.

In neither case was it necessary to make a second application, but I would certainly have done so had it been necessary.

## EAR SUPPOSITORIES.

Radlauer, of Berlin, *Therap. Woch.*, makes suppositories for the ear of cocain, menthol, resorcin, cocoa butter and olive oil, which also contain a cotton wad to prevent the escape of the fluids as they dissolve. They are recommended highly by Lasser, as they are effectual, and save the introduction of the various medicines separately. The patients can insert them themselves, if necessary, to save time and trouble in clinics, etc. They are designed to heal inflammations, to soften accumulations of wax, to prepare the ear for operations, etc., and are made in two sizes, for children and adults.

## Book Notice.

A SYSTEM OF PRACTICAL MEDICINE. By American Authors. Edited by Alfred Lee Loomis, M.D., Late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M.D., Professor of Materia Medica, Therapeutics and Clinical Medicine in the New York University To be completed in four imperial octavo volumes containing from 900 to 1,000 pages each, fully illustrated in colors and in black. Vol I. Infectious Diseases. Vol. II. Diseases of the Respiratory and Circulatory Systems, and of the Blood, Kidneys and Genito-Urinary Organs Vol III. Diseases of the Digestive System, of the Liver, Spleen, Pancreas and other Glands; Gout, Rheumatism, Diabetes and other Constitutional Diseases. In Press. Vol. IV. Diseases of the Nervous System and of the Muscles. Diseases of doubtful origin, Insolation Addison's Disease, etc. In active preparation. For sale by subscription Per volume cloth $5.00; leather, $6.00; half Morocco, $7.00. Lea Brothers & Co., Publishers, Philadelphia and New York Toronto: McAinsh & Kilgour, Confederation Life Building.

Volume II. of this great work lies on our table. It is fully up to Vol. I in merit, and that is saying a good deal. It may seem needless to say to our readers that such a work, undertaken by the firm of Lea Brothers & Co., would necessarily be first-class; but the result so far even surpasses what we had anticipated To say that it is up-to-date, well written well arranged, well printed, does not do justice to the work. We have gone over a great part of the book with great interest and pleasure, and have no hesitation in saying that it is the best work on the diseases discussed in its pages that we have ever seen.

It is a pity that medical literature is so evanescent. It is the price we as individuals, have to pay for being in the ranks of a profession which is the expression in a concrete form of the most progressive science the world has to-day. But we venture to say that the works in question will be standard and classical for many years to come. The list of contributors to this volume contains many well-known names, of which we may mention Thomas Warren, Coleman, Cutler, Loomis, Alfred Lee and Shattuck

DOCTOR,—Your library is not complete without the HYPNOTIC MAGAZINE. Cost of this handsome monthly, including premium book on SUGGESTIVE THERAPEUTICS, is only One Dollar ($1.00) a year.

THE PSYCHIC PUBLISHING CO., 56 5th Avenue, CHICAGO.

# The Canada Lancet.

VOL. XXX.] TORONTO, OCTOBER, 1897. [No. 2.

EDITOR:
JOHN L. DAVISON, M.D.

ASSOCIATE EDITORS:

*Surgery*:
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine*:
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology*:
J. ALGERNON TEMPLE, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics*:
CAMPBELL MEYERS, M.D.

*Pathology and Bacteriology*:
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat*:
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D.

*Pædiatrics*:
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M.D.

*Eye and Ear*:
G. STERLING RYERSON, M.D.
C. TROW, M.D.

*Genito Urinary Surgery*:—G. P. SYLVESTER, M.D., Business Manager

## AXILLARY LIPLOMA.

BY D. W. M'PHERSON, M.B., TOR. UNIV.; M.D.C.M., TRIN. UNIV.

As lipomata are a common class of tumors, we seldom see reports of them in our journals, unless they present something out of the ordinary run.

The one I am bringing before you presents a few points different from what we usually see in this class of tumor.

Namely, I., The position of the tumor.
II., Its rapid growth.
III., Not being distinguishable as a tumor of that description on being so deeply situated.
IV., The relation of the axillary contents to the tumor.

The history of the case is as follows: Mrs. J., age 42, family history good; personal history good up till three years ago, when, on going down the cellar stairs one day they fell from under her, and she tumbled in a heap on the cellar floor. Was greatly shaken up with the fall, but nothing out of the way was noticed at that time.

About one year ago noticed that the right chest near the shoulder was slightly larger than the left; no pain or inconvenience.

Six months later dull aching pains would shoot across the right shoulder. They seemed to be most severe below the clavicle in the interval

between the deltoid and pectoralis major muscles. This region now appeared very much larger than the left side, pain became more frequent and often, also, sensation of numbness extended from the shoulder to the fingers.

When I saw the case first, on April 14th, 1897, the condition was as follows:

On inspection appeared as if right shoulder was dislocated forward under the clavicle.

Measurement showed right shoulder two inches larger than left, and right arm, at insertion of the deltoid muscle one inch larger than left arm.

A general erythema extended over the shoulder and arm, the forearm being of a dull, congested color.

On palpation no definite tumor could be made out; point of greatest tenderness was over the space between the borders of the deltoid and pectoralis major muscles; under the region of the costo-coracoid membranes all movements of the arm were restricted, and if forced caused great suffering.

No point of fluctuation could be found, not even when fingers were pressed up in axilla; just an equal firmness all over the anterior shoulder region.

Counter irritants and anodyne liniments were tried for two weeks, but were of no avail.

Consent for an exploratory incision was now gained, and on consultation with Dr. Norman Allen, we decided to make an incision in the axilla, and through it to remove what we found, having the consent of the patient and friends to do what we thought best; a questionable diagnos of lipoma being made. On April 30th, 1897, with the kind assistance of Dr. Allen, I made an incision in the axilla, the arm being fully extended; after the skin was divided with a scalpel, the deepening of the incision was done by the handle of the scalpel, and very fortunately I did so, because the first structure to come in sight was the axillary vein, greatly congested, and immediately along its outer side the median nerve. Underneath these was found a large, firm lipoma with a distinct capsule, the capsule being firmly adherent to the axillary contents. The lipoma extended up under the pectoral muscle to the clavicle, and was of a cone shape. After considerable difficulty, having to separate the median nerve and axillary vein from the tumor, it was drawn out between them, when it was found adherent underneath to the axillary artery, from which it was carefully dissected and then successfully removed.

The lipoma was six inches long and four inches across at the bottom, flattened from before backward, resembling a cone flattened.

The internal appearance was of an ordinary lipoma.

The starting-point was undoubtedly under the costo-coracoid membrane, from that it spread downward, between the axillary vein and artery to the axillary space, thus accounting for the pressure symptoms. The incision was closed with silk-worm gut sutures, and firm pressure applied; healing took place kindly. Patient now uses the arm without the least discomfort, movement being free in all directions.

## TREATMENT OF BEGINNING DEAFNESS.

MURRAY McFARLANE, M.D.,
Laryngologist St. Michael's Hosp., Tor.; Member British Assoc. Science.

Among the very worst afflictions of the flesh which man is called upon to bear, is deafness. Shut off to a greater or less extent from an appreciation of the beautiful sounds of nature, tormented in a great number of cases by that most distressing symptom, tinnitus aurium, becoming taciturn and suspicious, with the mental confusion and loss of memory that accompany so many cases of deafness, his lot is a sad one to contemplate; especially as medical science can do so little when the disease becomes advanced, and then it is, unfortunately, that the aurist is generally first consulted. It is in the earlier stages, when the disease is confined to the eustachian tube and pharynx, that treatment is so useful, relieving the catarrhal processes that tend to creep up to the middle ear. with consequent thickening of the mucous membrane, anchylosis of the small bones, and adhesions of an inflammatory nature.

On examining our patient we find a history of slight hissing or roaring in the ears, with a feeling of stuffiness, as if the external auditory meatus was full of wax or other foreign substance, while the patient cannot hear so well as formerly, especially in a noise or when many are speaking, and is subject to repeated "colds in the head." The pharyngeal opening of the eustachian tubes feel itchy, the nose probably secretes more than normal, while the pharynx is congested, with minute blood vessels coursing over it, terminating usually in small granulations, while the vault is seen to be in a decidedly catarrhal condition, and may present adnoid vegetations, especially in children.

Upon examining the membrana tympana, it is usually slightly sunken, and not so lustrous as usual, with a shortening of the triangular spot of light. This is due to the fact that there is not enough air in the middle ear to keep the drum in position, owing to the thickening of the mucous membrane of the eustachian tube preventing the entrance of a proper air supply from the throat, the result being that a partial vacuum is produced on the inner side of the membrana tympani, and the external atmospheric pressure causes the drum to become depressed, as we have seen.

In these cases, if we inflate the middle ear by catheter or Politzer bag the pressure is equalized, with restoration of hearing and cessation of the buzzing noise.

In order to illustrate the cause of diminished hearing, we may take an ordinary "kettle-drum," strike it with a stick, when a clear, resonant note is heard; but stuff the drum with cotton, or place a weight upon the upper membrane, and a dull, flat sound is the result. Remove the cotton or weight, and the clear note is once more heard. The same is the case with the human ear, and the indications are to remove any thickening or congestion in the middle ear, and restore the patency of the tube in order to equalize the air pressure in the tympanum. To do

this we must first of all remove all possible causes of the eustachian catarrh, namely, diseased conditions of the nose and throat, being particularly careful not to do more harm than good by indiscriminate use of the cautery or cutting instruments, which are potent for great evil in unskilled hands. It is not necessary to slice away at every slight deviation of the septum, or cauterize deeply inferior turbinate enlargements, which may be simply due to passive engorgement, without organic thickening.

When we have succeeded in removing these causes of eustachian inflammation, our next aim must be to keep the patient's general health in as good a condition as possible, and it is in these cases that we most frequently find the digestive system at fault, the patients being in many cases the victims of the so-called "uric acid diathesies." For such, an occasional calomel purge, with a mixture of nitromuriatic acid dilute and tr. nux vomica of each 10 drops three times a day for five days, followed by the salicylate of soda 15 grains and bicarbonate of potash 20 grains, in peppermint water, three times a day for two days, seems to act like a charm.

Plenty of vigorous exercise must be taken, and sponging the surface of the body with cold water, followed by a good rub down, has an excellent effect.

As to local treatment of the naso-pharynx, the writer uses a fine spray of nitrate of silver, varying in strength from 30 to 60 grains to the ounce of distilled water; this to be directed against the pharyngeal orifices of the eustachian tubes every second morning, together with the use of a local non-irritating alkaline spray through the nares, such as the "Plasma Nasal Solution" (Murray McFarlane), Parke, Davis & Co., every night and morning. This solution is made by the addition of one "Plasma Nasal Tablet" to two ounces of lukewarm water, forming a mixture identical in composition and specific gravity with the plasma of the blood. It will be found entirely non-irritating, and may be used for an indefinite period without exciting engorgement or irritation of the parts.

The London *Lancet* of August 7th speaks of it as follows: "Perhaps the most interesting preparation recently sent to us by this firm (P., D. & Co.) is the Plasma Nasal Tablet. It is designed so that when dissolved in two ounces of water a solution of the same density as blood serum is obtained. The calculated effect of this is to prevent diffusion of the solution through the mucous membrane, leading to engorgement and irritation. The tablets are composed of sodium chloride, sulphate and phosphate, with definite quantities of the same potassium salts (same as in the blood); to these is added a small quantity of menthal.

"The resulting solution would appear to be well adapted for washing out the nasal cavities."

The writer can assure the profession that if the above treatment is thoroughly carried out in catarrhal deafness where no organic changes have taken place, many cases may be saved that would otherwise progress to a condition of affairs not amenable to treatment. As to the use of the Politzer bag, or catheter for inflation purpose. It should be done

about twice a week, and the patient should not be allowed to inflate by Vansalva's method, which has a tendency to increase local congestion in the tympanum, and is usually done to excess, causing a relaxation of the drum membranes.

The intention of this paper has not been to enter into the pathology, symptoms and various methods of testing aural troubles, but simply to place before the general practitioner a simple and usually successful method of treating what may be termed tubal deafness, from extension of catarrhal processes commencing in the nose and throat.

---

## TUBAL PREGNANCY DIAGNOSED BEFORE RUPTURE, CŒLIOTOMY AND RECOVERY.*

W. R. NICHOLS, M.D., BADEN, ONT.

When Mr. Lawson Tait, in 1883, had the courage of his convictions to remove a pregnant tube that had ruptured, it was not simply an abdomen that he opened, but a new and brilliant field, rescued by the beneficence of Surgery. As a consequence of his work and teaching, cases, at this day fairly numerous, have been reported from every civilized country, showing patients rescued at the brink of the grave, and restored to society as its most useful members.

It had long been supposed that the condition of ectopic pregnancy was exceedingly rare, but in a series of 3,500 general autopsies, made by Dr. Formad, Pathologist to the Philadelphia Hospitals, there were found not less than 35 cases of ectopic pregnancy, or *one* per cent.! surely frequent enough to put every thoughtful general physician on the alert. As a practical subject it can never become devoid of interest: the difficulties of diagnosis, even after rupture; the suddenness of the symptoms during apparent excellent health; the immediate and imminent danger to life, and the necessity for a capital operation in the great majority of cases, to give even a chance for life, all combine to render the subject of profound interest and importance to the general practitioner, as well as the gynæcologist and surgeon.

In regard to the diagnosis before rupture, the symptoms are generally so mild that the patient does not seek relief from her physician, and if she does these are not differentiated from those belonging to minor ailments. On this subject Mr. Tait says: "The strangest thing to me is that in the enormous experience I have now had in tubal pregnancy (39 cases at time of writing in 1889), I have never but once been called upon to make an examination until rupture occurred, and in that case there was neither history nor symptoms which enabled me to do more than determine there was tubal occlusion. Under these circumstances, I think I may be excused for maintaining a somewhat sceptical attitude towards those gentlemen who speak so confidently of making a certain diagnosis before rupture." And J. Bland Sutton, in his work on Surgical Diseases of Ov-

*Read before Toronto Pathological and Clinical Society.

aries and Fallopian Tubes, 1893, states that he is acquainted with but one instance of diagnosis before rupture, which was made by Dr. Herman, Senior Obstetric Physician to the London Hospital. Dr. Joseph Price, at the American Medical Association held at Atlanta, Ga., May, 1896, stated: "I have never recognized one before rupture; all before is conjecture rather than knowledge" (subsequently added from CANADA LANCET, page 399, April Number.)

As the following case has some interesting points apart from being diagnosed before rupture, I venture submitting the details of the patient's history and the findings that led up to the diagnosis, in the hope that the data may be of use in these rarely-met cases.

HISTORY—Mrs. T., aged 37, German, parents living and healthy. Had 9 brothers and sisters of whom 5 died in infancy from "teething;" those living are healthy. Menstruated first at fourteenth year, and thereafter regularly unless physiologically suppressed. Married at 21; has had 11 children and one miscarriage at 4½ mos.; two children died in infancy, remainder are healthy. After second confinement had an attack of "inflammation;" attending physician thought an abscess would form on left side, inguinal region, but it passed away, leaving, however, more or less tenderness. Five years ago, cough expectoration, hæmoptysis with loss of flesh occurred, was ill a year or two, but improvement set in, and now has been fairly free from pulmonary symptoms for 3 or 4 years. 1894, May 24th, was delivered of a strong, healthy child, everything normal, made a rapid recovery. 1895, June 2nd, had a miscarriage at 4½ mos., membranes enveloping child at birth, rapid recovery, no chill, headache, or fever. It was patient's habit to menstruate soon after delivery whether nursing or not; accordingly she was unwell on July 12th, again on August 11th, but no further show occurred until Sept. 15th, when, washing at a tub, she was taken with a sudden and severe pain in the lower part of the abdomen, on the left side, radiating through to the back and accompanied by a gush of clear fluid from the vagina, 1 to 2 oz. in quantity. Patient felt quite weak and faint for an hour or two, but was free from marked pain or discharge until the 20th, when another severe pain was experienced, followed immediately by a hæmorrhage simulating menstruation, continuing until the 26th, when it gradually disappeared. An examination made on the 15th September showed heart and skin and kidneys to be normal, upper lobe of right lung consolidated (arrested phthisis). Temp. and resp. normal, pulse 90. A bimanual examination of the pelvic organs revealed a uterus slightly enlarged, a cervix slightly softened, and a fulness rather than a distinct mass on left of uterus, no special tenderness, no collapse nor signs of internal hæmorrhage, no morning sickness. Two subsequent examinations between the 20th and 30th enabled me to localize a distinct tumor occupying the left Fallopian tube, circumscribed to the touch, no inflammatory tenderness in it, some pulsation, but no fluctuation appreciable. A distinct sulcus between it and the uterus could be made out, as well as the ovary posterior and external to it. In order to arrive at a satisfactory diagnosis it was necessary to exclude the following: Rupture of amnion in uterus (abortion), rupture of amnion in tube (tubal abortion),

hydrosalpinx, pyosalpinx, hæmatocele, hæmatoma, dermoid, ovarian and broad ligament cysts, etc. Due regard was paid to the fact that the tumor had appreciably enlarged; under observation the tube had been diseased, leaving it in a condition for such an accidental arrest of the ovule; it was not the patient's habit to have delayed menstruation. The diagnosis having been communicated, and the risks and treatment pointed out, I asked the family to satisfy themselves by calling any one they wished. Dr. Bingham, of Waterloo, responded, and fully agreed with the diagnosis given. As nine small children were in the house of limited room, I had her carefully removed to St. Joseph's Hospital, Guelph, where with the assistance of Drs. Robinson and Orton, I opened the abdomen in the middle line, passed the finger to the site of the tumor, which was found tense, almost to bursting, and bound by firm adhesions to pelvic wall and bowel. These adhesions were the legacy of the attack of inflammation of a dozen years previous. These were tied off and cut, with the usual difficulty, and the pedicle ligatured by transfixion. Considerable trouble was met with from hæmorrhage, the pedicle having to be brought out after being cut off, and ligatures reapplied. The abdomen was irrigated, sponged out and drained, and the walls were sutured *en masse*. The condition of the patient forbade any attention to the other tube. Recovery was uneventful, the patient returning to her home in 19 days.

The tumor had the appearance of a short, moderately-sized sausage, dark in color, due to fluid and clotted blood within, the clotted blood being in lamellæ, arising from successive intra-tubal hæmorrhages. A distinct membrane formation (chorion and amnion), and the stump of a cord, *in situ*, were demonstrated; but the fœtus was not found, being lost most probably in removal when the tube ruptured. The wall of the tube was much attenuated and stretched, so much so that it ruptured on removing it.

The case illustrates well the fact that we cannot determine beforehand the existence and nature of adhesions; and what may appear an inconsiderable operation may prove to be most formidable. That I have been able to restore this mother to her home and nine little children, and save them from a fate that befel me in early life, has been due in no small measure to the ability and painstaking care of Drs. Robinson and Orton, the former of whom conducted the after treatment for me, and to the efficient nursing of the devoted Sisters of St. Joseph.

P.S.—Note, December 2nd, 1896. The other tube performs its functions normally. Mrs. T. has been delivered of a fine, healthy child, thirteen months after removal of the left tube. All are doing well.

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

## THE SURGERY OF EMPYEMA.

BY T. N. RAFFERTY, M.D., ROBINSON, ILL.

The fact that empyema was not only recognized but treated surgically in the remotest days of antiquity adds interest to the discussions of the present day as to the best surgical procedures for its relief. The surgical treatment of the disease is said to owe its origin to the mythological legend which tells us that Jason, seeking death in the midst of battle, received a spear wound in the chest, and was thus artificially relieved of an empyema. The same story, with a different hero, is related by Plinius in the seventh book of his "History of Nature." We also have the oft-quoted case of Kinesiros, whose pleura is said to have been opened by the actual cautery by Euryphon of Knidos. Traced, as it can be certainly, from Hippocrates down through this long series of years, the surgical relief of empyema has afforded a theme for animated discussion as to the proper indications for its performance. Hippocrates operated by incision with the knife, by actual cautery, and by perforation of the ribs; and operations of this sort seem to have been common enough in his day. Another striking fact is that Hippocrates taught and practised frequent washing of these patients before the operation, and thus really practised what is now known as aseptic surgery. From soon after the days of Hippocrates there is no further account of surgical treatment of empyema for more than two thousand years, when it was revived by Sedillot, but was not looked on with favor by other surgeons, and even Dupuytren said he would rather die of the disease than be killed by the doctors. Since the revival of the operation by Sedillot, however, it has never again been remanded into obscurity, but has gradually come to be considered, in some of its forms, indicated in all cases of empyema that threaten life and cannot be cured by other means. Up to 1850, however, there was no real certainty or agreement as to its use, except as a last resort. About this time Trousseau laid down the proposition that in pleuritic effusions, no matter what their character, we ought not to wait

till death is imminent, but operate with the view of warding off dangerous attacks of dyspœna, which may unexpectedly seize the patient and carry him off with great rapidity. The great Frenchman encountered opposition to his views from every side, notwithstanding his successful results; and the operation would perhaps again have fallen back to its former limited sphere had not Dr. Bowditch, of Boston, begun his brilliant advocacy of Trousseau's doctrine, which was soon aided by the invention by Dr. Wyman, another American, of his suction instrument, and aspiration made possible. Dr. Bowditch operated for empyema two hundred and fifty times, and published papers on the subject in the *American Journal of the Medical Sciences*, April, 1852; *The Medical Monthly*, January, 1853; *Boston Medical and Surgical Journal*, May, 1857; and read his last paper on the subject before the New York Academy of Medicine in 1870. Leaving out the treatment with drugs and counter-irritants, by which it is hoped to produce absorption of the pleural effusion, the lines of treatment now advocated are about as follows: 1st, simple aspiration; 2nd, aspiration followed by irrigation with antiseptic solutions; 3rd, aspiration followed by permanent drainage, Beulau's method: 4th, simple incision; 5th, resection of small portion of a rib to secure free drainage; 6th, resection of larger portions of ribs sufficient to secure drainage and produce retraction of chest wall, Estlander's operation; 7th, thoracoplasty, or removal of the chest wall, Schede's operation.

Dr. Carl Beck, who is a strong advocate of the resection of one or more ribs in the treatment of all operative cases of empyema, regards it as deplorable that there should be any difference of opinion in regard to the advisability of this method in preference to any and all others. His sarcastic assertion, that an explanation of this deplorable difference of opinion is only to be found in the fact that the "general practitioner" has had the effrontery to attempt the solution of surgical problems, certainly has no scientific weight in deciding the best method of treating a condition that varies so much in different cases as does pyothorax.

Many cases of empyema occur in children, and, for reasons which we shall see later on, it is quite probable they may do well with a less radical treatment than is required in adult cases. So the chronicity of cases, the condition of the lung, and the viscidity of the pus contained in the cavity are all factors that should be considered in deciding whether aspiration, incision, or resection of ribs will be best suited to any particular case. It has been suggested by Dr. Tiffany, of Baltimore, that much depends on the character of the pus found in these cases, not only as regards prognosis, but in deciding the character of the operation required. He advises the use of the hypodermatic needle for withdrawing a sufficient amount of the pus for bacteriological examination, and believes that if the patient has pyæmic cocci he will die under any form of treatment; while if there are only staphylococci, or pneumococci, removal only is necessary without irrigation; but if streptococci are found, resection and washing out are necessary. Cases due to simple infection by pneumococci or staphylococci are therefore to be regarded as benign; those caused by saprophytes, in which case the infection is putrid, as in the highest de-

gree unfavorable; while those arising from streptococcus infection occupy a middle ground as regards their danger to life. However, in many pleuritic effusions, both serous and purulent, no microbes can be found. It has been assumed that such cases are tuberculous, but there seems no sufficient reason for such conclusion. If the empyema is due to a mixed infection, the gravity of the case depends on the predominance of the more virulent bacteria present in the exudate. The very fact that surgeons still differ as to plans of treatment, and show equally good results from their favorite methods, is a striking proof that all cases should not be treated alike. Any effort to inculcate a different doctrine, for the gratification of personal pride in one's own particular method, savors of an egotism that is dogmatic and unscientific.

All operative measures in the treatment of empyema have for their chief end two objects; first, to evacuate the pus or other fluid contained in the cavity; and second, the obliteration of the cavity by bringing together its walls. The latter is best done by that method which closes the cavity by expansion of the lung and not by retraction of the bony thorax.

The first question to be decided in any case is whether any operation is necessary for its relief. This question was discussed in a paper by Dr. John Ashhurst, Jr., Philadelphia, read at the meeting of the American Surgical Association in 1894. He then said: "No operation is justifiable unless the presence of pus is certain; unless thorough treatment by medicinal agents, blisters, etc., has failed; or unless the dyspnœa and other symptoms are so urgent as to demand immediate relief." Since the presence of pus is never absolutely certain, it follows that we should not, in ordinary cases, operate unless the symptoms are urgent. If operation is decided on, a simple aspiration should be done unless it seems certain that this will not be sufficient. The aspiration should be done under strictest antiseptic precautions, and with the same care in this regard as though it were a major operation, because on our care in so doing depends the certainty almost of changing a serous effusion, if such is found, into a purulent one.

The point usually selected for aspiration is the sixth intercostal space, but the exact location is largely a matter of choice of the operator. It should be low enough to permit of the emptying of the cavity, and high enough to be out of the way of the diaphragm, which moves upward as the fluid flows out. If the fluid evacuated is serous, and thorough sepsis has been secured, the chances are favorable that nothing more will be required. Following this first aspiration irrigation with antiseptic should not be done. If the fluid is purulent, a reaccumulation is likely to occur, in which case either simple incision or puncture and permanent drainage (Beulau's method) should be practised. These methods favor the obliteration of the cavity by expansion of the lung, and if this takes place the patient is left in much better condition than when retraction of chest wall occurs. If from any cause sufficient drainage cannot be had by either of these methods, then a small portion of rib (an inch is ample) may be excised. If, however, the lung is bound down by adhesions so that expansion is impossible, then the operation of Estlander is certainly

indicated, in which case there must be sufficient excision of ribs that by collapse of the bony thorax the costal pleura will be brought in contact with the layers next the lung.

A good many writers on this subject seem to have confronted simple resection of a small portion of one rib, for the purpose of securing and maintaining better drainage than can be had by simple incision, with the operation known as Estlander's, which has for its object an entirely different purpose. The Estlander operation, as before stated, aims at retraction of the chest wall in cases in which the already crippled lung cannot expand, and consists in the removal of extensive sections of two or more ribs. In many cases, however, it has been demonstrated that the mechanism of the cure of empyema is not dependent upon the retraction of the chest walls, and hence a resort to the Estlander operation is not necessary in all cases, even of protracted and extensive pyothorax. Such at least was the report of the committee appointed by the Belgian Academy of Medicine, who, with M. Deroubaix as their chairman, made exhaustive study of the surgery of empyema. Their report, however, retains the Estlander operation in the list of legitimate surgical practice, and leaves the selection or rejection of this operation to the tact and judgment of the surgeon in each particular case. Verebélyi, of Vienna, thinks resection of ribs is generally unnecessary, and is only indicated when by approximation of the ribs a free exit of pus is hindered. Moullin favors a trial of aspiration, and states that in children it is often successful and in case of adults is always worth the attempt. If this is not successful he advises incision and the insertion of as large a drainage tube as the space between the ribs will permit. He resorts to resection only in extreme cases, when there is such an overlapping of ribs that drainage through a tube cannot be accomplished; and regards washing out the cavity with antiseptics as unnecessary and dangerous. Resection certainly increases the liability to pyæmia and produces deformity of the chest. Another and most serious objection to it is that its performance necessitates the use of anæsthetics, which not only are not well borne, but are absolutely dangerous in these cases. To operate without an anæsthetic is brutal in the extreme, and only the direst necessity should ever be a sufficient reason for its undertaking. Notwithstanding these and other objections to an operation which is certainly not devoid of danger, it is the plan advocated by many eminent surgeons, among whom may be mentioned Koenig, Schede, Weir, Bull, McBurney and Beck. Dr. Achutz, in a paper on "The Treatment of Empyema in Children," read before a meeting of the Medical Society of Hamburg recently, emphasized the necessity of costal resection in all of these cases, and reports eighteen operations and sixteen recoveries. He deprecates all forms of expectant treatment and performs the radical operation as soon as the diagnosis is made that effusion exists.

As showing how favorable results are sometimes secured, under unfavorable circumstances and from methods of treatment that would not be considered good surgery by the extreme advocates of resection in all cases of empyema, the following report of two cases is offered. These cases are not reported as embodying all the writer's experience with empyema,

nor for the purpose of "deducing classical rules from the results and observation of two cases," but for the reasons above stated.

Case I.—E. T——, eight-year-old girl, was seen ten years ago in consultation. There was a large effusion in the left pleural cavity, following an attack of pleuropneumonia. The heart was displaced, and its apex beat was to the right of the sternum. The symptoms were urgent, and the dyspnœa was extreme. With no antiseptic precaution, the fluid, which was sero-purulent, was aspirated—at least enough of it to relieve the urgent symptoms. The point of puncture was covered with adhesive plaster, which was pushed off very soon afterward by the escape of fluid. This discharge continued for about five months, gradually diminishing, finally ceased altogether, and the fistula closed. The child recovered her health permanently and perfectly, and is now a robust, red-faced young lady, with no chest deformity whatever.

Case II.—J. R——, aged forty-eight years, has had chronic tuberculosis for years. In December, 1893, he became much worse and was confined to his bed for the next four months. With the advent of warm weather he rallied and seemed much better. At this time no effusion was discovered. Three or four months later he came to my office, and, on examination, a large effusion in the right pleural cavity was diagnosed. The next day, under antiseptic precautions, sixty ounces of pus were removed by aspiration, much to his relief. At this time more than a year and a half afterward, there has been no reaccumulation, the tuberculous process has been latent, or nearly so, and he has been in very fair condition.

A study of recent literature and observations made at a number of the largest clinics of this country, both east and west, have led me to question the propriety of the extensive resection of ribs in any but the most desperate cases. And while there are, no doubt, many cases in which the resection of a portion of a rib give better results than the simpler methods, there have been many cases thus operated more for the sake of doing the major operation than with the belief that it was necessary. Especially is this true of the operation of Estlander and the thoracoplasty of Schede. As for other novel procedures occasionally advocated, such as curetting the pleural cavity, etc., they need only to be mentioned to be condemned.

So, too, the indiscriminate use of antiseptic injections is to be strongly deprecated. Many fatal results are recorded as immediately following this practice; and in the operation for ordinary empyema it is an unnecessary and dangerous procedure. If done at all it should be at later periods and then the utmost caution should be observed. Surgeons should have "*Non nocere*" for their motto more often than they do, and not allow the *furor operandi* to drive it from their memory. Many, very many, cases of pleuritic effusion do well without any operation whatever, and when operation is necessary the simplest one that will cure the patient is the best.

---

In septic conditions the patient is often very uncomfortable by reason of dryness of the tongue. A bit of ordinary chewing-gum will usually start the oral secretions, and will in a very short time give relief.

## FOREIGN BODIES IN THE AIR PASSAGES.

BY HAL C. WYMAN, M. SC., M.D., DETROIT, MICHIGAN.

The air passages may be defined as all that track of mucous membrane embraced in the nose, face, fauces, Eustachian tubes, glottis, larynx, trachea, bronchi, bronchioles and air cells. A foreign body lodged in any of these parts is material for this paper, but it is the writer's intention to use only a part of it.

Children, oftener than older persons, are sufferers by the lodgment of foreign bodies. All physicians have had experience with cases of little ones hiding a bean, button, or other articles in some of the apertures of the body, but it is not always that the case is a menace to life. Surgeons of military experience have recorded cases of lodgment of balls and other missiles in all of the air passages, and reading them is instructive to all practitioners of the healing art. It is the writer's intention to confine his remarks to cases of foreign bodies in the larynx, trachea and bronchi.

The symptoms presented by cases of this kind will vary according to the character of the foreign body and its location. The body may be either fluid or solid. The fluids may be water, blood, pus, or almost any other liquid, and on the character of the fluid much may depend. The coagulability of blood, when that fluid is poured into the bronchi, may yield a firm body which may plug the lung as effectually as a cork and cause speedy death by asphyxia. The body may be fixed or movable and by that feature the symptoms will be influenced. When the body slips from the narrow glottis or bronchi into the comparatively roomy trachea, the cough and suffocation may for the time disappear, to recur the moment the smaller air passages are again obstructed. Cases of movable foreign bodies in the air passages may go on in this manner for weeks, constantly annoying the patient, more or less, until the body is either coughed out, suddenly kills him, or becomes fixed in a bronchial tube, when it gradually exhausts him by pneumonia. On the size and shape of the body much depends. A small body may plug but one of the smaller bronchioles and cause but little serious disturbance. A slender body may rest in the glottis and cause a suffocating cough. A broad, flat body may effectually close the glottis like a valve. The writer has seen a child postmortem that died suddenly, the mother said while eating peanuts, one of which "went down the wrong way." The thin, red shell or pericarp of the kernel was found resting over the chink of the glottis, where it acted as a valve, permitting air to leave but not allowing it to enter the chest. A chunk of masticated meat has been found plugging the bronchi at their bifurcation. The historian, Pliny, is said to have died by choking on a grape seed. So much depends upon the character of the foreign body that it is difficult to fix a physiological basis for the symptoms and signs its presence in the air passages may occasion, but generally cough and dyspnea of greater or less degree may be expected. If these phenomena do not become so severe that the life of the patient is suddenly threatened by asphyxia, a more chronic course with inflamma-

tion and fever may be looked for. The right bronchus is the one most frequently receiving the foreign body, and when it is completely plugged, the left lung, it is said, will not perform the work of respiration necessary to maintain life for more than a few hours. In such a case, if a remedy is to be of use, it must be applied quickly.

The writer saw a patient at the Emergency Hospital who came there on foot, who was livid of face, who breathed with great difficulty, and was tugging at his throat with his hands. He could not speak. All his energy was devoted to getting air into his chest; his eyes stood out and he presented a general help-me-quick aspect. He was seized by two students, who mounted the operating table and quickly inverted him, and held him suspended by the feet while vigorous artificial respiration was practised by two other students. A dime fell from his mouth to the floor and he at once begged to be let down, that he was all right now, the dime was out, it had been lodged in his windpipe. In his case there was no time to make a laryngoscopic examination and ascertain in what part of the larynx, trachea or bronchi the dime was lodged.

In another case tracheotomy for croup had been performed. There was severe hemorrhage at the time. Introduction of the tube and relief of the dyspnea had apparently checked it. The next morning the writer was hastily summoned by the nurse. The patient was breathing with great difficulty. Recession of the abdomen, intercostal and supraclavicular spaces occurred with each inspiratory effort. Death by asphyxia was imminent. The tube was clear. Through the night much bloody froth and mucus had been coughed from it. A loop of silver wire was thrust through the tube into the trachea and onward into the bronchi. It brought out a plug of clotted blood about three inches long. All disturbing symptoms were immediately relieved. The nurse explained that the struggle for air had come on quite suddenly while she was changing the iodoform gauze which protected the entrance to the tube. Blood had doubtless flowed into the trachea during, or soon after, the operation. It had coagulated and stuck to the wall of the trachea, from which it was loosened by the necessary manipulations of the nurse and was sucked into the bronchi where it caused the dyspnea. To avoid a foreign body of this sort, great care should be taken to prevent blood flowing into the larynx and trachea during operations about these organs or about the nose or mouth. To this end it is well to place the patient with his head hanging down below the level of the lungs and to tampon about the tracheotomy tube. The ends of the tampon should be left hanging from the wound so that they cannot become foreign bodies in the air passages. Anesthesia probably favors the passage of blood or pus from wounds or abscesses about the nose or mouth.

Teeth and pieces of bone have been dropped during operations upon the jaws and bones of the nose and palate, into the larynx, trachea and bronchi. A man of previous fair general health, who had been operated upon in a New York clinic for an exostosis of one of the turbinated bones, came to the surgical clinic of the Emergency Hospital about two months ago, after treatment in New York. He had a hacking cough and great pain in his right side. He said the cough commenced while the

operation was being performed and that the doctors thought he had swallowed the wrong way some of the cocaine which had run through his nose. He was syphilitic; his right side was swollen; there was no vesicular murmur over the right lung; the lower right intercostal spaces protruded; he had fever, chills, no appetite and was much emaciated, but able to walk about. There was dyspnea when he tried to lie down. The chest was opened and a large quantity of pus discharged. Fever stopped, he ate and gained in strength, but his sleep was harrassed by more cough than he had before. One day he coughed up a piece of the turbinated bone with chisel marks upon it. He then improved more rapidly and left the hospital feeling quite well, with a drainage tube in his chest.

Solid bodies, both heavy and light, for example, metal and cork, may find lodgment in the air passages and give rise to great difficulties in their removal. A child two years old, while playing, suddenly ran to its mother exhibiting signs of embarrassed breathing. It made known that something had gone down its throat the wrong way. The mother put her finger in the child's throat but could feel nothing. The symptoms, however, improved. They recurred at night and it was thought the child had croup. Doctor Holmes was called. The alternate attacks of labored and normal breathing suggested to him the presence of a foreign body. Inquiry revealed that the attack came on while the child was playing with some brass rods an inch and a quarter in length and one-quarter of an inch in thickness, one of which is here shown. The symptoms continued off and on from Saturday until Monday, when the patient became much worse, with breathing and facial expression like that seen in laryngeal stenosis. In consultation with Doctor Holmes, Doctor Linn, and the writer, it was thought best to open the trachea and explore for the cause of threatened asphyxia. An incision was made and a long pair of slightly curved forceps inserted. A metallic substance was felt, but it was so firmly embraced by the right bronchus that it could not be grasped by the forceps. The patient was now quickly inverted, a few vigorous strokes of artificial respiration, with a few sudden jerks upward of the little one's body, were given. The metal plug was loosened and dropped into the larynx and adjacent trachea where it was caught with forceps and removed through the wound. A part of the brass cylinder you will observe is blackened by action of the fluids and gasses to which it was exposed.

Living things other than tubercle bacilli occasionally become foreign bodies in the respiratory tract. A mulatto girl came to my office a few years ago with a distressing cough, fever, night sweats, emaciation, a picture of advanced pulmonary consumption. No vesicular murmur could be heard in the apex of her right lung. There was exaggerated vesicular murmur of the whole left lung. Her pulse was quick and irritable. She had two attacks of bloody, frothy expectoration, and was now coughing up a pint of thick, ropy sputum every day. I advised a diet of milk and cod-liver oil and urged the use of antiseptic inhalations for half an hour every three hours when awake. She consulted me once or twice a week for about two months. I examined her chest each time she came and soon noticed that the diseased area was not increasing. One day she

brought to me an irregular, round mass, some larger than a pea, which she said she had coughed up with blood and sputum that morning. It was a friable, earthy mass in which was found fragments of legs, wings, and body of a fly. She continued to improve and recovered. The existence of the fly in the lung was not suspected by the patient nor her friends, but its demonstration revealed to me by an old black woman, a tradition or myth of that superstitious race. Nearly all fatal illness among them is caused by accidental, intentional or wickedly planned swallowing of flies.—*The Physician and Surgeon.*

---

## RELAPSELESS CURE OF INGROWING TOE-NAILS.

EVAN O'NEILL KANE, M.D., KANE, PA.

I am aware that this trifling ailment scarcely deserves a place among surgical affections, yet its obstinacy and the pain and discomfort it occasions are often most distracting to the patient and harassing to the physician.

By the usual operative methods, treatment of ingrowing toe-nail is anything but satisfactory. Prompt relief, it is true, follows the extraction, paring away or splitting and packing of the nail. But unless we completely destroy the matrix, the trouble will surely recur with the fresh outgrowth of the nail or the next tight pair of shoes. To cut or burn out the matrix is not only very painful but often very difficult to accomplish, and at best our patient must be permanently deprived of the nail. The little operation which I am accustomed to performing is practically painless, and does not admit of the possibility of relapse.

It is as follows: The toe having been made thoroughly aseptic, a rubber tube tourniquet is cast around it and its tissues rendered insensible with cocaine or cold normal salt solution. I next split down the outer border of the nail about a line from its edge and beyond the region covered by the overlapping inflamed tissue. This piece of nail I then pull out with the tweezers in the ordinary manner.

I now cut a V-shaped notch in the outer border of the toe extending the full length of the nail. This is made wide enough to include all the hypertrophied, ulcerated and overlapping tissue, and is proportionately deep (anywhere from an eighth to a fourth of an inch). The angles of the incision are now brought together, either by suture or strips of adhesive plaster, and an antiseptic dressing applied. If the patient will remain quiet, with the foot elevated for four or five days, the part will be completely healed within that period. No future trouble can be anticipated if a sufficiently large wedge of diseased tissue is removed, the new nail overlapping instead of being overlapped by the tender skin.

# MEDICINE.

IN CHARGE OF

N. A. POWELL, M.D.,

Professor of Medical Jurisprudence and Lecturer on Clinical Surgery, Trinity Medical College; Surgeon to the Hospital for Sick Children, and to the Extern Department Toronto General Hospital; Professor of Surgery, Ontario Medical College for Women. 167 College St.; and

WILLIAM BRITTON, M.D., 17 Isabella Street.

## HOW SHOULD A ROOM, IN WHICH A PATIENT WITH CONTAGIOUS DISEASE IS TO BE CONFINED, BE PREPARED.

As long as we can take some portion of the house and isolate it from the rest, the patient can ride quarantine safely, and other inmates, so long as they have no communication with the sick or the immediate attendants, can follow their ordinary avocations, without endangering the public health, but this can only be so where proper precautions are taken.

And first the room. As it is a well-known fact that fabrics which are of a soft texture, such as plush covers of furniture, heavy hangings, carpets, thick woollen dresses, and the like, absorb and retain contagion easier and longer than cotton or linen goods, the first procedure after the diagnosis is made is to strip the room. Up with the carpet, down with the hangings, out with upholstered furniture. Bare to the walls and boards. On the floor put some old carpet or pieces of carpeting, some old rugs or some such articles. These are of no value, and can be destroyed. If the light is too strong by reason of the removal of the stuff curtains, put up dark shades. They are non-absorbent, and if considered best to destroy them, are not expensive. Some cane-bottom chairs, and, if a sofa is needed, a cheap cot, with shuck mattress, makes a very convenient lounge. If there is a lounge which is not of value, it could remain, and be taken away afterwards, or if its covering is absorbent, the cover must be removed, after fumigation, and burned, and then the frame can be sent to the upholsterer for another.

Doors which communicate with other rooms not used by the sick should be caulked with cotton, or, what is better, have strips of paper pasted over all cracks. The door leading out into the hall, if only one room is used, should be protected by sheets hung on the outside, so arranged as to cover the door. These can be kept moistened with a disinfectant. If there is a passage-way into which the door opens, it is better to hang the sheet-screen a short distance from the doorway. This forms a sort of ante-chamber, and in it a table can be placed on which the food and all other necessaries may be placed, thus guarding from contact those serving from those nursing the patient. Where there is no passage-way, it is well, by light pieces of wood, to extend the sheet-screen from the door, so as to create a small space between it and the door, securing

in this way the ante-room, but this screen should reach from floor to ceiling.

The room has been prepared. Now for the nurses. Their dress, when in the sick-room, should always be some cotton or linen gown of a light color. Not only do these absorb less than woollen garments, but can be, by boiling, thoroughly disinfected and not injured. And if the case is a bad one, it is well to protect the nurses' hair by having caps worn that cover it. Common sense must come into play in handling these cases. You cannot shut up your nurses all the time, confining them to the sick-room, without rendering them more liable to take the disease. Therefore, some way to give them fresh air and exercise must be devised which will be without danger to those they happen to meet. They may, then, in another room, or in the improvised ante-chamber, some place which has not been directly exposed to the contagion, change their clothes, leaving off all clothing that has in any way been exposed, and putting on uncontaminated garments. The fresh clothing should be brought them at the time they wish to change, and be taken away again when they return to resume their labors. Thus prepared, the nurse can go out for air and exercise.

When the time has come, in the opinion of the attending physician, to once more allow the patient to mingle with other people, the health officer should be notified, that he may visit and decide whether pratique should not be given; and having, after examination, decided that all is well, the patient is dressed in fresh, clean clothing, after having had a disinfectant bath; the nurse and attendants change their gowns, leaving all infected articles in the sick-room; they vacate their recent quarters with their change, turning over to the representatives of the health board all the room contains for them to work their will upon, and this the officers do, putting into one pile or place all articles that will have to be removed for destruction, and in others those that either will be safe after the disinfection, or which may be sterilized by boiling. The fumigation is done, the room closed, and so left until next day, when the condemned articles are removed; the wrath-producing placard is taken down, and the stern grasp of the health board released from the house and its inmates "by due process of law."—Dr. Lewis Balch, *Albany Medical Annals*

---

Nitroglycerine.—It is an excellent stimulant in syncope, in threatening heart failure or collapse from various causes; in acute lobar pneumonia, used early enough and boldly enough, it may render venesections unnecessary, and its skilful use often aids recovery from apparently desperate conditions. It is useful in chronic interstitial nephritis, in conditions of arterial fibrosis and atheroma, in gout and rheumatoid arthritis, and sometimes in anemia, chlorosis, and the anemia of tuberculosis. In the management of cases of muscular and valvular disease of the heart it finds a wide field of usefulness; in dilatation it may be used with digitalis, in fatty heart it may be used without other drug; in cases of mitral lesion it may be conjoined with digitalis, strophanthus, sparteine, and the like; in cases of aortic lesion, atropine, strychnine, and caffeine may be used with it.—*Philadelphia Polyclinic.*

## POST-MORTEM EXAMINATIONS.

The ordinary autopsy is a very coarse affair, and as a means of education in pathology may be greatly improved. Wherever it is worth while to make a section, the autopsy should be complete. Suppose the cause of death to be typhoid fever. There should be something more than an opening of the abdomen, a stripping of the ileum, ligature at given points and slitting of the gut with scissors, in order to see the ulceration of Peyer's and the solitary glands. While this process is all well, it does not go far enough. There should be an injection of the arteries by some method that would allow of a filling of the capillaries, perhaps by colors, and then sections made for illustration by the microscope.

It is now known that the typhoid bacillus is found in other parts of the body than the ileum. Cases have recently been reported where it was found in the brain meninges, which may account for the low muttering delirium observed in some cases and not in others. No doubt the bacillus can be found in the ulcers located on the vocal cords, present in some cases and not in others, thereby accounting for the hoarseness of voice observed in some instances. The bacillus may also be found perhaps in the Eustachian tube or internal ear, causing dullness of hearing. These lesions are not constant, but when they occur the cause should be sought for, and also those which may be found exemplified in other parts of the body. No doubt there are cases in which the peritoneum is invaded by the bacillus.

Pathology is not yet a complete science, but the discoveries which are to be made and demonstrated are to be done through an intelligent use of the microscope. In much of this work there is necessarily a good deal of threshing over of old straw, and unless one is familiar with the literature of medicine, discoveries will be announced from time to time which are not discoveries, although the later man may be perfectly honest in his statements. This was demonstrated at the late meeting of the American Medical Association, when Prof. Flint fairly showed in his address in medicine that recent reports made by two European investigators upon the glycogenic function of the liver had been published by him more than thirty years ago.

Many an observation has been made by those engaged in such work, and records being unpublished were allowed to pass, to be again discovered and written up for the glorification of an individual not the first in the field.

In all of this there is an important lesson. Investigators doing work original with themselves should carefully verify their work, then put it in print, and eventually it will find its proper place, just like water seeking its natural level. A good story is none the worse for being twice told. If all matter published were to be condensed to that which is strictly new there would be a wonderful winnowing of threshed-over material. And yet much of the threshed-over work is exceedingly valuable, valuable not only to the thresher but also to the great army of men who are unfamiliar with that which has gone before, through lapse of memory or other cause.—*Cincinnati Lancet-Clinic.*

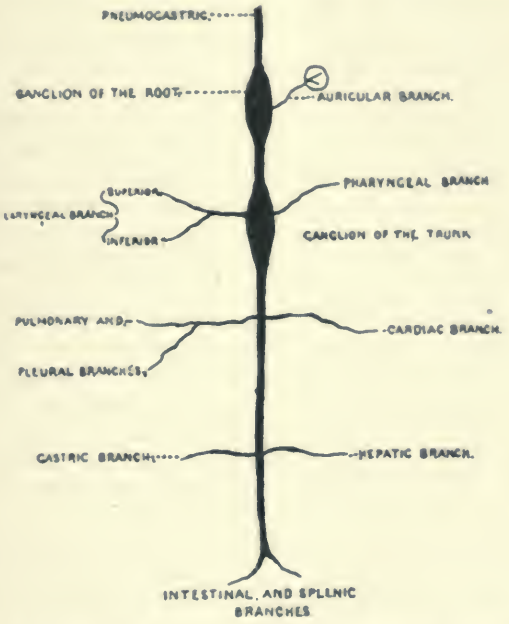
## COUGH AND ITS TREATMENT.

Cough is a reflex movement. It depends on irritation of the sensory fibres of the pneumogastric nerves, the impulse from which, being transmitted to the ganglia, or to the root of the latter, is referred back to the lungs through the motor filaments of the same nerve, and there manifests itself in the complex phenomena of expusive contraction which we know as cough. In order to comprehend the varied and manifold conditions under which cough may arise, it is important to briefly study the origin, course and distribution of this nerve. It may be described as arising from two nuclei, one of which is situated in the lower half of the floor of the fourth ventricle, and the other in the oblongata near the olivary body. In the jugular foramen, through which it emerges from the skull, is the ganglion of the root of the pneumogastric, which in all probability is the homologue of the ganglion on the posterior root of the spinal nerves. From this ganglion is given off the *auricular* branch which supplies the external ear and the membrana tympani. Only a short distance below this point is another enlargement, about an inch long, which is known as the ganglion of the trunk. Here the pneumogastric anastomoses freely with the spinal accessory and receives filaments from the sympathetic and the hypoglossal, and from the upper part of this ganglion the *pharyngeal nerves* are given off. The *superior laryngeal* nerve, which supplies sensation to the mucous membrane of the *larynx, epiglottis*, and base of the tongue, also arises from this ganglion. The next branch which is given off is the *recurrent*, or *inferior laryngeal*, which is the motor nerve of all the intrinsic muscles of the larynx except the cricothyroid, which receives its innervation from the superior laryngeal nerve. Before the pneumogastrics enter the lungs, they form the *anterior* and *posterior pulmonary plexuses* in connection with the sympathetic, and thence their fibres run along the *bronchial tubes*, the pulmonary arteries, and throughout the lung tissue. On the outer surface of the bronchial tubes, as well as in the textures of the lung, are found a large number of small ganglia in connection with these nerve fibres, and in many instances the nerve filaments of these seem to terminate in the *mucous membrane of the bronchi*. The nerves of the *pleural coverings* are also derived from the pulmonary plexuses, and those fibres which are distributed to the pulmonary pleura also have ganglia attached to them. Additional branches of the pneumogastric nerves are distributed to the *heart, stomach, liver, intestines, spleen, kidneys*, and *suprarenal capsules*. From this it follows that irritation coming from the ear, larynx, trachea, bronchi, lungs, pleura, heart, pharynx, stomach, liver, intestines, or from any part of its trunk or origin, is liable to produce and excite cough.

Not all these regions are equally sensitive in this respect. Thus Kiernier, Koths and others have shown that in the respiratory tract the larynx possesses the greatest impressibility, while the trachea and bronchial bifurcation are less sensitive, the bronchial walls still less so, while the alveoli have very little sensibility. The pulmonary pleural lining is especially sensitive and very liable to cause cough.

I will now consider the different kinds of cough:

*Ear Cough.*—This cough is excited by an irritation of the auricular branch of the pneumogastric nerve. Arnold cites the case of a girl who had persistent cough and excessive expectoration, with extreme emaciation. It appeared that she had many months previously introduced a bean into the meatus of each ear, where they were discovered on examination. After the removal of these foreign bodies the cough ceased and the patient recovered her health. Accretion of cerumen in the ear is an occasional cause of cough, which will abate when the offending material is cleaned out. Aurists also know that the introduction of a speculum into the ear, or of a sound or probe into its cavity, frequently causes cough. A draught of cold air striking the meatus of the drum of the ear is followed by coughs and colds in some people independent of any cat-




arrhal affection of the middle ear. This has led to the custom of plugging the meatus with cotton or wool, which shields and protects the over-sensitive ear-surface of these people.

*Laryngeal Cough.*—Laryngeal cough depends on a supersensitive or inflamed larynx, and is accompanied by hoarseness, pricking or burning, and by a constant desire to clear the throat. The cough is dry and brassy, with very little expectoration, while on the other hand it may be moist with an abundant secretion. Its causes are principally a strain of the voice, especially in the open air; bad management of breathing in public speaking; the excessive use of alcohol and tobacco; the inhalation of dry hot air, dust, etc. In the treatment of this form of cough the exciting cause must be removed. The inhalation of watery vapor impregnated with the compound tincture of benzoin, or the inhalation of

the fumes of gum camphor, or of four or five drops of chloroform from a handkerchief, or the spraying of the larynx with a solution of cocaine hydrochlorate, thirty to forty grains to an ounce of water, are very useful methods for allaying the irritability of the larynx. Lozenges containing cocaine hydrochlorate, sugar, licorice powder and powdered acacia, and allowed to dissolve slowly in the mouth, also have a soothing effect. At the same time the general health must not be overlooked. Strychnine, quinine, iron, the hypophosphites and cod-liver oil are exceedingly beneficial in this respect.

*Bronchial Cough.*—This is the cough which comes from catarrh of the bronchial mucous membrane, and one of its immediate offending causes is a collection of catarrhal material on the surface of the bronchi. The explosive movement of the chest muscles, which we know as cough, seeks to remove this impediment. Most patients who suffer from this kind of cough locate its source in the upper sternal region directly over the seat of the large bifurcation. This is largely due to the fact that so long as the bronchial epithelium is intact, the movement of its cilia tends to transport all the catarrhal material from the smaller into the larger tubes and thus to finally deposit it in the region to which the feelings of the patients refer it. Many a patient of this sort, not understanding the mechanism of his trouble, frequently expresses his belief that if he only could get rid of the worry under his breast bone he would be entirely well. Cough of this kind is always accompanied by a copious yellow expectoration, which is generally most abundant in the morning on account of an accumulation of the latter during the previous night. There is, however, another bronchitis which is not associated with either a copious or a yellow expectoration, but with one that is tough, tenacious, grayish, and sparse. This is the bronchitis which has no direct connection with catarrh of the bronchial tubes, but depends on stasis or on hyperemia of the lungs due to cardiac disease, generally of a mitral nature, and is very liable to be accompanied by blood-spitting, a feature which is rarely present in the idiopathic form of bronchitis.

*Pleuritic Cough.*—Pleurisy, as is well known, gives rise to a persistent cough, with little or no expectoration; and pleurisy being oftener due to rheumatism than not, it follows that the remedies which do good in the latter also prove efficient in the former affection; hence the salicylate of soda mixture recommended in rheumatic or gouty bronchitis will also be found serviceable here.

*Asthmatic Cough.*—The cough of asthma is always accompanied by an abundant expectoration after the attack of asthma has ceased. During the attack the cough is dry, short, and hacking, and the patient suffering greatly for the want of breath. To shorten the asthmatic grip break a bead of amyl nitrite in a handkerchief and allow the patient to inhale it, or give two drops of a one-per-cent. solution of nitroglycerin in a teaspoonful of water, or administer hypodermically one-twentieth of a grain each of strychnine and morphine. One-twentieth of a grain of strychnine in a teaspoonful each of syrup of hypophosphites and hydriodic acid, four times a day, the strychnine being gradually increased, gives very good results. Asthma is very frequently mixed up with rheu-

matism, and hence the salicylates and lithates are useful in its treatment. Lithia tablets, such as are now manufactured by many druggists, dissolved in a glassful of water and taken three or four times a day are frequently helpful. When the attacks are prolonged or run into each other they become very depressing and exhausting, and then the patient must be placed in bed and kept there until the fury of the affection is abated and until the former strength is recovered.

*Phthisical Cough*.—The cough of phthisis varies with the stage of the disease. In its incipiency the cough may be very slight, and indeed be absent in some cases; but in others it is one of the earliest and most constant symptoms, although there may be very little or no expectoration. In the advanced stage of the disease cough is more or less persistent, and so long as the catarrhal element predominates it is accompanied by an abundant yellow expectoration. After the formation of cavities the expectoration is generally of a grayish color, and of tough, fibrous consistency.

We have already seen that cough is a reflex nervous movement, and hence it necessarily follows from a fundamental physiological law that the degree and amount of cough in any case correspond with the irritability or impressibility of the nerve-supply of the lungs. This applies more forcibly, perhaps, to the cough of phthisis than to that of any other form of lung disease, and explains why the cough of this affection not only varies very much in different individuals, but why it varies in the same individual under different bodily positions. In the very nervous phthisical individual the cough may be one of the most prominent and distressing symptoms from the beginning to the termination of the disease, while in the insane, for instance, in whom the sensibility of the nervous system is in a great measure subdued aud obtunded, phthisis goes through its various stages without any cough, and often very little expectoration. Then again, as a rule, the cough is easier when such patients sit or stand than when they lie down. This is probably due to the fact that the lying position allows more blood to gravitate to the apices, which are oftenest involved, and the increased fulness of blood thus induces greater irritability in the nerve filaments of these parts. It is also well known that patients can lie much easier on the healthy side of the body than they can on the side which is affected. This is perhaps also explainable on the score of the principle just referred to. Sleep is an obtunder of nervous irritability, hence the cough of phthisical patients, after they have once fallen asleep, is comparatively quiet during the night, but is always worse in the morning on account of an accumulation of material in the bronchial tubes during the sleeping hours.

It is clear, therefore, that the cough of phthisis is largely a question of nerve irritability, and that this element must be kept prominently before our minds in the treatment of this symptom.

Cough may be excited by congestion or inflammation of the pharyngeal mucous membrane, and by elongation of the uvula to such a degree that it touches the base of the tongue. Astringent gargles of tannic acid, sugar of lead, or the spraying of the pharynx with Dobell's solution, or with a weak solution of cocaine, or removal of the uvula, are the local

measures which must be resorted to in such cases. At the same time it is also important to look after the general health of the patient. On the other hand, cough may come from dyspepsia, from intestinal indigestion, from constipation, from disease of the liver, from gall-stones, from worms in children, etc. In such cases attention must be directed to the organ whose functions are disordered.

*Cough from Aneurism.*—There exists in nearly all cases of aneurism of the aortic arch a cough which is dependent on pressure of the aneurismal tumor on the recurrent laryngeal or pneumogastric nerves. This is especially the case when the tumor involves the transverse or descending portion of the arch of the aorta, for the left recurrent laryngeal nerve winds around the arch from the front backwards, while the corresponding nerve on the right side does not.

*Cough from Pressure on Vagus.*—There is no doubt that cough may be induced by pressure on the vagus other than that which is exercised by aneurisms. A cough of this kind may follow measles, diphtheria, bronchitis, pleuritis, etc.; diseases which lead to secondary enlargement of the bronchial or cervical glands, and a consequent compression of the vagi by these; or to a thickening of the pleural membrane, which impinges on the vagus and embarrasses its function. Dr. James F. Goodhart relates the following very interesting case of this kind (*British Medical Journal*, 1879, vol. i., p. 542): "A child eight years old had a severe paroxysmal cough. Parents thought the disease asthma. The child would suddenly start up in bed; his face blue; his eyes staring; all the respiratory muscles in violent action—a picture so terrible that I shall never forget it. He would have five or six of these attacks in a day, and in the meantime some distress of breathing would continue. He became comatose and death supervened. The autopsy showed recent double pleurisy, and bronchopneumonia at both bases. No tubercle. In the right mediastinum there was one greatly enlarged bronchial gland, which had caseated and suppurated in its centre. It was adherent to but did not press on the trachea; the right vagus was firmly adherent to it, and surrounded by dense fibrous tissue to such an extent that it was impossible to isolate it even by cutting."

*Cough from Fatigue.*—There is a cough which may be called the "cough of fatigue." Many persons without being subject to any special disease of the respiratory apparatus, and especially those who possess a family tendency to phthisis, cough when they are tired out by physical or mental work, or when depressed by incidental diseases like colds, headaches, injuries, etc., or by loss of appetite, worry, or by excesses of any kind. Not only is this true of persons who are comparatively well, but those who suffer from respiratory diseases, particularly the phthisical, always cough more when they are fatigued or exhausted from any cause. A cough of this character is in all probability due to excessive waste of nerve force which is reflected on the lungs—the weakest and most vulnerable organs in the body in such individuals—and for its relief the most effective remedies are not physical exercise and outside air, but rest in bed, nutritious food, strychnine, hypophosphites, quinine, and cod-liver oil.—Dr. Thos. H. Mays *(Therap. Gaz.)*.

# OBSTETRICS AND GYNAECOLOGY.

IN CHARGE OF

J. ALGERNON TEMPLE, M.D., C.M., M.R.C.S., Eng.
Professor of Obstetrics and Gynæcology, Trinity Medical College;
Gynæcologist Toronto General Hospital; Physician to the Burnside Lying-in Hospital.
205 Simcoe Street.

C. A. TEMPLE, M.D., C.M., F.T.C.M.,
Assistant at St. Michael's Hospital. 200 Spadina Avenue.

## ECTROPION OF THE CERVIX IN NULLIPARÆ RESEMBLING LACERATION OF THE CERVIX.

BY CHARLES P. NOBLE, M.D.

The diagnosis of laceration of the cervix carries with it the presumption of an antecedent pregnancy unless it can be definitely shown that the cervix has been torn by operative treatment; hence, it is of medico-legal importance to render the diagnosis of this condition as exact as possible, and at the same time to recognize all possible sources of error arising from other conditions which simulate a laceration. It is because of their medico-legal importance that the following cases are reported:

Miss X., aged thirty-five, consulted me in June, 1895, and presented a letter from her family physician describing her symptoms, which were largely nervous in character, and stating that he thought they were due to a small tumor growing in the anterior wall of the cervix and projecting into the external os uteri. On examination a patulous os uteri was felt, and to the touch there was apparently a moderate laceration of the cervix. On inspection it was found that a well-marked ectropion was present, simulating a laceration of the cervix, and that the mass attached to the anterior wall of the cervix, which projected into the os uteri, consisted in a much hypertrophied anterior column of the arbor vitæ. A careful examination satisfied me that the cervix was not lacerated, although the appearances were very suggestive, and a superficial examination might readily have led to an erroneous diagnosis. The uterus was dilated and curetted, and the cervix was amputated, care being taken to excise the redundant tissues of the anterior column. The parts were restored practically to their normal condition, and with great benefit to the health of the patient. This patient was interrogated as to the possibility of a previous conception and stated that she was a virgin, which statement I have no reason to question.

Miss Z., aged nineteen, consulted me in December, 1895, for the cure of obstinate dysmenorrhœa. Upon examination by touch a patulous external os uteri was found with apparently a bilateral laceration of the cervix. Upon inspection a well-marked ectropion of the cervix was seen to

exist, and the appearances were highly suggestive of a laceration of the cervix. No scar tissue, however, could be seen in the angles, and after a careful examination I became satisfied that the condition was one of ectropion and not of laceration. Both the anterior and posterior columns of the arbor vitæ were greatly hypertrophied, and projected into the external os uteri. Either column was large enough to fill up the external os, hence they were crowded alongside of each other, giving the external os an irregular outline, instead of the usual transverse slit, as shown in the accompanying illustration, which was obtained from photographs made for me by Dr. W. D. Robinson. The uterus was dilated and curetted and the cervix amputated, restoring the parts to approximately their normal condition. The operation was followed by relief of the dysmenorrhœa and restoration of the patient to health.

The tissues removed by amputation in this case were sent to Dr. Thomas S. Cullen, of the Johns Hopkins Hospital, who made the following report:

"The specimen consists of the lower portion of the cervix. The tissue is 3 × 2.5 cm, and averages 1 cm. in thickness.

"*Examination of the alcoholic specimen.*—The everted cervical mucosa, with its delicate folds, is everywhere visible. In the centre is the slit-like opening of the cervix, 1 cm. in breadth. Surrounding the margin of the specimen is a small zone of the vaginal portion of the cervix. Which is the anterior and which the posterior is impossible to say. The cervix is, however, divided into four segments, which are nearly uniform in size. This division is caused by four shallow clefts commencing in the cervical canal and extending outward nearly to the vaginal portion of the cervix. [Caused by the hypertrophied anterior and posterior columns.] It looks as if there were simple eversion of the cervical mucosa.

"*Histological examination.*—A section extending from the vaginal portion of the cervix on one side through to the vaginal portion of the opposite side shows that the squamous epithelium of the vaginal portion is intact. Whether the epithelium covering the everted cervical portion has been cylindrical or flat it is impossible to say, the alcohol having so contracted the superficial portions. The cervical glands are seen opening on the surface, and also are abundant in the depth of the stroma. On examining the stroma of the cervix no evidence of a scar can be made out. Sections made in various directions give like results.

"*Diagnosis.*—Eversion of the normal cervical mucosa."

It is unfortunate that the tissues removed by amputation in the first case were not examined also, as then microscopical as well as clinical evidence of the real nature of the condition would be at hand. Numerous cases of granular erosions of the cervix and not a small number of slight ectropion of the cervix in nulliparous patients have come under my observation, but the two cases reported above are the only ones in which the conditions were such as to make a diagnosis of laceration of the cervix a probable one. Dr. Cullen's report assists in substantiating the diagnosis of ectropion as against laceration, but unfortunately throws no light upon the cause of the ectropion, as the report indicates that the

tissues were practically normal. Clinically the conditions were far from normal, and resulted in breaking down the health of the patient, who was rendered unable to perform her usual duties. Further evidence of the abnormality of the condition consists in the fact that her health was restored when these tissues were removed by operation.

The question of possible pregnancy was investigated in this case also, and I am satisfied that this patient like the first was a nullipara.

Ectropion of the cervix has been recognized as a separate condition since Roser described it as "inflammatory ectropion," together with what he called "cicatricial ectropion," and which is now recognized as laceration of the cervix (*Archiv für Heilkunde, II. Jahrgang, Heft 76*, No. 298, Leipzig, O. Weigand). A moderately thorough search of the literature shows only two references, however, to the possibility of confounding the two conditions in diagnosis to be found in the literature. The two articles which have the most direct bearing on the subject are one by Fischel upon the morphology of the cervix uteri, quoted by Penrose (*Archiv f. Gynäkologie*, 1880, Bd. xvi., S. 192) and one by Penrose entitled "Congenital Erosion and Split of the Cervix Uteri" (*Amer. Jour. Med. Sciences*, May, 1896). Fischel calls attention to the fact that a congenital malformation of the cervix may resemble a laceration.

"I am now able," he says, "to show a photographic representation of the cervix of a new-born infant which presents an inferior degree of this condition. The separation of the lips does not extend all the way to the vaginal junction, but concerns only the two-fifths of the lateral corners. Nevertheless, the two lips, deprived of their commissures, gape open, the crest of one being 9 mm. from that of the other, exposing the cervical surface of both lips for a distance of $\frac{5}{8}$ mm. This case shows that a peripheral notching of the cervix is not always a sign of a previous labor, but may represent a condition of the cervix in pregnant women whom we were forced to consider primiparæ not only through their own statements, but also from the condition of the external genitalia. This case is of great forensic importance, in that the proof of a former labor can no longer be claimed for such a condition of the cervix."

This is a distinct recognition of the possibility of some other cause than a laceration in labor or by instrumental means giving rise to a condition simulating laceration of the cervix, and also of the forensic importance of this fact. Fischel, however, was dealing with congenital conditions found by examining the bodies of young infants.

Penrose reports the case of a virgin in which the cervix was mushroom-shaped, the face of it being round and about one and a half inches in diameter. The external os was transverse and one third of an inch broad. Upon the face of the cervix were several scattered patches of erosion. The cervix was amputated and examined microscopically, with the following result:

"The cervix was covered with squamous epithelium, except on the small patches of erosion, where cylindrical epithelium was present. Racemose glands (like the normal glands of the cervical canal) opened all over the face of the vaginal cervix, in front, behind, and to the sides of the external os. They were found as far as one half to three quarters of an

inch from the external os. These glands opened on the vaginal aspect of the cervix, where it was covered with squamous epithelium, and this epithelium extended to the ducts of the glands, which were lined with cylindrical epithelium. The vaginal cervix was, in fact, a glandular structure."

Penrose considers that this condition was congenital in origin and due to the development upon the vaginal aspect of the cervix of those structures which are normally confined to the cervical canal.

I have myself seen not a small number of cases similar to that described by Penrose and illustrated in his article, and have likened the shape of the cervix in such cases to that of a "pig's snout," the peculiar rim or border which runs around the vaginal cervix being quite similar to the shape of the snout of a pig, and of course somewhat similar to that of a mushroom. Cervices having this peculiar contour are usually found in patients having an imperfect development of the sexual organs, and, as a rule, instead of having a "split" of the cervix suggestive of a laceration, they have a very narrow os uteri—the so-called "pinhole" os. Erosions are quite common in such cases.

The etiology of the ectropion in the cases which I have reported is obscure. The condition may have been congenital in origin, but there is no evidence of this fact. In both cases there was well-marked pelvic congestion, and both patients had been over-worked, so that a possible explanation is that pelvic congestion caused a simple hypertrophy of the mucous membrane of the cervical canal, followed by ectropion. My object in reporting these cases, however, is not to theorize concerning the etiology of the condition of ectropion in nulliparæ, but to insist upon its medico-legal importance.

---

## THE DESTINY OF VAGINAL HYSTERECTOMY FOR MALIGNANT DISEASES.

BY C. LESTER HALL, M.D., OF KANSAS CITY, MO.

So far as this occasion is concerned, it matters not whether we accept Cohnheim's theory that "the only cells capable of originating neoplasms are those sequestered during embryonic life," or, with Williams, believe that "neoplasms are of intrinsic origin, due to a modification of the formative process by abnormal forces generated within the body, rather than extrinsic, due to inflammation or the intrusion of micro-organisms," or favor the more recent idea of the bacterial origin of all malignant growths. The fact confronts us that of all organs none is more prone to take on malignant degenerative process than the uterus. Exposed as it is to so much irritation and injury incident to menstruation and mishaps in early girlhood, and those disturbing causes of mature womanhood—the marital relations and the traumatism resulting from childbirth, with constant irritating discharges setting up perverted cell action, it is not surprising that this nesting organ of all mankind should so often be the point of election for malignant degeneration.

The achievements of pelvic surgery by the vaginal route, with its immediate low mortality, has stimulated surgeons to extirpate the uterus for divers conditions, without, I fear, a just regard to ultimate results. Certainly in non-malignant conditions the removal by the vaginal route promises much in the way of completeness and lessened shock, for "benign tumors remain local, but the malignant types penetrate into the neighboring tissues and destroy them, and the tumor germs, being carried off in the blood and lymph, give rise to metastatic or secondary neoplasms in all parts of the system. Metastases have essentially the same structure as the primary tumors, and are found either in the vicinity of the latter, that is, in the region supplied by the lymph and blood which comes directly from the tumor, or in distant organs, after the tumor germs have passed through the heart. It is characteristic of tumor metastases, especially those from really malignant tumors, to go on growing indefinitely. Normal tissue germs do not have this peculiarity." (Tillman.)

Senn says: "Glandular carcinoma is followed at an early age by regional infection. The lymphatic glands nearest the organ affected in the direction of the lymph current are usually involved first, when, step by step, successive glands are implicated, until the entire chain of glands has become infected. Secondary tumors are subject to the same degenerative changes as the primary. The glandular tissue is completely removed in the lymphatic glands by the substitution of tumor issue." He further speaks of "a wide zone of infiltration," and says that Virchow pointed this out several years ago, and that Waldeyer described it as an inflammatory zone, because he found in the connective-tissue numerous small cells. "Infiltration tissue consists of leucocytes and young epithelial cells, which, like the leucocytes, wander by virtue of their ameboid movements into and along the connective-tissue spaces. Carcinoma of the alveolar type may develop within the cervical canal, and destroy the neck of the uterus before it is discovered, or in cancer of the body of the uterus the cervix may become constricted, causing retention of the secretions (hydrometra), or the body of the uterus may be well-nigh destroyed before the cervix is attacked." Lymphatic infection is found in the lumbar, retroperitoneal and inguinal glands. "Occasionally there may be found an isolated nodule of cancer higher up than the apparent edge of the disease. Whether this is due to lymphatic infection or to multiple cancer formation is an undecided question." (Warren.)

"Examination of the retroperitoneal lymphatic glands in suspected carcinoma of the uterus should never be neglected. In the great majority of cases the surgeon has to deal with carcinoma after regional infection has set in, and when the disease has advanced too far for a radical operation." (Senn.)

The last quoted authority also says: "The greatest progress in the treatment of carcinoma will have been made when we are placed in possession of an *infallible* means of early diagnosis." This was said in connection with carcinoma in general. Difficulties multiply when we consider carcinoma of the uterus, and there are no means of overcoming the obstacles presented. The hidden location of the organ, the secretive and

natural disinclination of women to communicate even to their nearest friends any suspicion entertained that all is not well, are barriers which will require the education of many generations to remove. The average woman is so ignorant of her own organism that she is incapable of differentiating between the normal and the abnormal. She begins early in her womanhood to expect the "the change of life." Allured by the dangerous and false teachings of the mother who tells her that irregular flow is not uncommon, and that she must not be alarmed at this, or even at an offensive discharge, she keeps her secret, in blissful ignorance of the progressive degeneration which has overtaken her. When at last forced by failing strength and pallid cheek to consult her physician, the discovery is made that the diseased process has destroyed the cervix, that the lymphatic pelvic glands have become infected and that the broad ligaments and peri-uterine tissues have been invaded, and little hope of relief remains, either by palliative or radical measures.

Despite statistics (which too often are deceptive) showing many apparently permanent cures, on high authority we are forced to the conclusion that most cases of uterine cancer presented are inoperable, at least, by the vaginal route. With these discouraging conditions confronting us, and bearing in mind the limited field of operation, the accepted infectiousness of cancer tissue, and the possibility of the transference of living tumor cells during an operation, coupled with the impossibility of removing in many cases *all* of the diseased structure, we are forced to admit that the removal of the uterus per vaginum for malignant disease is, in the majority of cases, a doubtful expedient. Complete cures are rare, even when the carcinomata are extirpated very early in their course. As a rule, one recurrence follows another until the patient succumbs to general exhaustion.

Gross long ago claimed that in cases of malignant disease of the mammary gland it was absolutely essential to remove with the gland all of the axilliary fat and lymphatics. In cancer of the uterus we have, in a degree, a parallel condition to deal with, but the narrow vagina and the danger of invading other important organs and structures precludes the possibility of completely removing by the vaginal route all probable diseased tissue. In view of the opinions of some of the leaders in medical thought, we are compelled to look further for other and better methods of procedure in dealing with malignant disease of the uterus. It is probable that any plan of complete extirpation will be found inadequate in a large percentage of cases, but that method which permits of the greatest opportunity for inspection of the diseased uterus, adnexa, and infected glands, and furnishes an opportunity for a more complete removal of all diseased structures, both primary and secondary, must ultimately become the operation of election.

The dexterity which has characterized American surgeons in abdominal section for the total removal of the uterus and appendages, leads to the belief that in the near future vaginal hysterectomy for malignant disease will be restricted to those rare cases in which women present themselves in the inception of the disease, and before secondary infection has taken place. It is the opinion of the writer that the more radical operation

known as the Clark method will supersede vaginal hysterectomy for cancer. By this abdominal method of total extirpation of the uterus and adnexa the posterior peritoneum and all glands at the bifurcation of the iliac vessels are brought into view and removed whether infected or not. We are thus enabled to go beyond the inflammatory zone and to remove diseased glands which are not within reach by the vaginal route. The bladder, the ureters, the rectum and all other important structures are brought directly into the field of vision. Thus directed, the hand of the operator does thorough work, and the poor sufferer has done for her the best that the science and the art of surgery can offer. The objection urged against this operation—that it is tedious, that too long exposure results, that prolonged anesthesia endangers the patient's life—will all be overcome by that practice which makes perfect.—*Medical News.*

## THE CULTURE DIAGNOSIS AND SERUM TREATMENT OF PUERPERAL FEVER.

Dr. F. W. N. Haultain read a paper on the above subject. He gave detailed accounts of three cases. The first was a primipara where help was needed in the labor by the application of low forceps. The puerperium for the first ten days was normal, except that the strength was not regained with the usual rapidity. On the twelfth day she fainted on attempting to rise, and for a fortnight her pulse was quick and there was a rise of temperature to about 100°F. On the twenty-sixth day she first complained of severe pain and swelling in the right thigh; this rapidly passed off; four days afterwards pain occurred in the left thigh and calf, associated with considerable swelling and severe constitutional symptoms; vomiting, sweating, and faintness. Dr. Haultain then saw her. Pelvic examination revealed nothing abnormal except a subinvoluted uterus and a slight swelling in the left broad ligament. The lochia were a little offensive, and a culture was made of the discharge from the interior of the cervical canal; one was also made from the blood drawn from the finger. The former showed a typical pure culture of the Loffler bacillus; 10 c.c. of the diphtheritic antitoxin were injected with marked beneficial results. On two successive days a similar quantity of serum was injected as the temperature again slowly rose. After the third dose the temperature fell to normal and she had an uninterrupted recovery. No case of diphtheria was present in the neighborhood and the attending practitioner had not seen a case of diphtheria for some weeks previously, but the drains were found to be in an insanitary state. The second showed marked signs of fever forty-eight hours after the labor. The medical man had used intra-uterine douches, but without benefit. Dr. Haultain saw her on the fifth day. She then showed signs of marked septic infection, the face had a leaden appearance, and there were erythematous patches on the abdomen. A culture of the discharge, similarly taken, was again made, and examination showed a mixed growth of streptococcus and bacillus coli. Anti-streptococcic serum (10 c.c.) was

injected, followed by a similar quantity the next day, and 30 c.c. on the third day, but no beneficial effect resulted. The patient developed an intractable diarrhœa; her left knee-joint became extremely painful; pulmonary complications and parotitis set in, and she died on the tenth day. A culture was made from the blood of the finger twenty-four hours before death, and a pure growth of the bacillus coli was found, which from its reactions was found to be extremely active and virulent. The patient was a coachman's wife and was confined in a room immediately above the stable. The third case had been attended to by an unskilled woman, and showed signs of fever on the third day. Dr. Haultain saw her four days afterwards. The vaginal discharge was offensive. The culture showed many streptococci. Anti-streptococcic serum (10 c.c.) was injected; the uterus was washed out with a 1 in 40 carbolic lotion and packed with gauze soaked in the antitoxin. On the next day a further 10 c.c. were injected. The temperature fell on both occasions. No further rise of temperature occurred, though the cervical discharge showed many streptococci. The uterus was washed out on the two succeeding days, and further examination showed the discharge to be free from septic organisms. On reviewing the cases, the first one was evidently a case of intra-uterine diphtheria, and the diagnosis would have been impossible except for the bacteriological examination. The second case showed features of interest in presence of mixed infection in the culture from the cervix and in the pure culture of the bacillus coli from the blood. Clinically, the violent diarrhœa, the erythematous patches and the absolute inefficiency of the anti-streptococcic serum, were of value. The third case was one of those simple cases of toxin poisoning which usually yield to antiseptic intra-uterine douching, the focus of the disease being thus removed. Still, it must be noted that intra-uterine douching had almost no effect until combined with the serum treatment. In all cases of puerperal fever the culture method of diagnosis was much to be preferred to all others. The microscope alone was helpful, but no idea could be obtained of the vitality or virulence of the organism. In the prognosis, a mixture of germ infection in a case was of serious import, as there was then increased virulence. The treatment of these cases could only be scientifically met by previous culture diagnosis, to detect which toxin was the main cause of the disease. For preventive treatment Dr. Haultain strongly urged the necessity of using a douche after labor in every case, and recommended 1 in 40 carbolic lotion, which had been found more efficient in experimental research than sublimate lotion.

Dr. Hart, Dr. Milne Murray, Dr. Barbour, Dr. McVail, Dr. Keppie Paterson, Dr. Jardine, and others took part in the discussion, and in reply as to the method in use of obtaining cultures, Dr. Haultain stated that he passed a Fergusson's speculum and exposed the cervix. A platinum wire, previously rendered aseptic by heating in a flame, was passed into the cervical canal and some discharge obtained on it. This was then dipped into the agar in a prepared test-tube, the tube at the time being held bottom upwards to prevent dust and germs from falling into it. A plug was inserted and the tube transmitted to the Laboratory of the Royal College of Physicians of Edinburgh.

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

## HYSTERIA IN EARLY LIFE.

BY AUGUSTA A. ESHNER, M.D.,

Professor of Clinical Medicine in the Philadelphia Polyclinic.

CASE V.—L. S., a colored girl, fourteen years old, complained of pain and soreness in the region of the stomach, which proved to be sensitive to the touch. She was unable to skip and jump and play like other children on account of the resulting distress. She suffered from nausea occasionally, unattended, however, with vomiting. There was complaint of a good deal of headache, although correcting glasses were worn. There were also present tic-like movements of the eyelids. The appetite was good, the tongue coated, the bowels constipated. Menstruation had appeared for the first time some nine months previously, and, although a little irregular, was unattended with pain. During the preceding month there had been suppression of urine for three or four days on two or three occasions. The urine itself was said to be clear and yellow. For two years the girl was subject to what were described as faints, in which she did not fall, though she seemed to lose consciousness. In these she clenched her fists, and on one or two occasions she kicked, but she had no well-defined convulsion. The duration of the attacks was said to range from five to thirty minutes. At the conclusion of the attack the child seemed exhausted and she felt drowsy. There was at no time undue laughter or causeless weeping. The attacks recurred two or three times a week, at intervals of two or three weeks. There had been a free interval of as long as three months. No definite cause could be assigned for the attacks, though they were associated in the mind of the mother with the function of menstruation, to which, however, their frequency bore no apparent relation. Nothing also was known that seemed to be capable of inhibiting or aborting the attacks. The child did fairly well at school, although apparently without ambition. There was no history of similar disease, or of other form of nervous disorder, in the family. The child had never suffered from any serious illness. She was considered sensitive. The knee-jerks were preserved, the patient jumping when the patellar tendon was struck and also in anticipation of a blow that was threatened but not struck. There was no gross sensory derangement. The heart displayed no abnormality. Dr. C. Y. White, by

whom the patient was referred to Dr. Brinton's clinic at Howard Hospital, informed me that the patient was susceptible to hypnotism, but her failure to return prevented further study of the case.

Although I believe this case to be one of hysteria, it would appear to be the part of wisdom to withhold for the present a final diagnosis, in order that further study and perhaps personal observation of one of the attacks may yield evidence of such a character as will permit of an unequivocal and unreserved conclusion.

Case VI.—R. F., a schoolgirl, fourteen years old, applied at the Orthopedic Hospital and Infirmary for Nervous Diseases, in the clinical service of Dr. S. Weir Mitchell, on July 3, 1896, with a history of having been frightened some eight months before by masqueraders. She fell to the ground and was unconscious for three hours. Her jaws were locked and she breathed heavily. After consciousness returned she went to sleep and remained in bed for several days on account of weakness. Some two months later, following a recitation, the girl lay down and became unconscious, and exhibited occasional twitches of the muscles. This attack lasted for three or four hours, and again several days were spent in bed. A third attack occurred after an interval of three months, without known cause. In this also the girl lay down, appeared unconscious, with her eyes open, and became rigid, but she did not bite her tongue. This attack continued for four or five days, during which the patient regained consciousness at times for periods of fifteen minutes.

At other times she appeared as if dead, being unable to see or talk. She took a little food, both liquid and solid. At the time of application the attacks recurred almost weekly, lasting for three or four days at a time. The seizures were characterized by rigidity rather than active movement. After some of the earlier attacks there was inability to see, walk or talk. In some of the attacks the patient scratched herself, in some she pulled her hair, in some she kicked at those about her, and in some she made attempts to bite. In some she groaned a good deal, and in others the rectal and vesical contents were passed incontinently. Some of the attacks had occurred while the patient was alone, and some at night in bed. Between the attacks she was often dull, despondent and uneasy. At times, and especially following the attacks, she cried freely, and at times she laughed unduly. At times, further, she was unusually obstinate. Appetite, digestion and sleep were good, and the bowels were regular. The knee-jerks were preserved, and the pupils were full, equal, regular and reactive to light. There appeared to be general diminution of sensibility to pin-prick. Of the family history it need only be said that the mother, fifty-three years old, was a nervous invalid. The patient herself had had measles and whooping-cough in childhood, and from time to time suffered from bilious attacks. Menstruation appeared first at the age of thirteen and was irregular and painful. In the intermenstrual period pain and swelling over the left ovarian region were complained of. Prior to the present illness there had never been a convulsion.

The hysterical nature of this case appears so obvious that further comment seems uncalled for.

CASE VII.—M. M., schoolgirl, fourteen years old, applied at the Orthopedic Hospital and Infirmary for Nervous Diseases, on September 14, 1896, in the clinical service of Dr. Wharton Sinkler, on account of a coarse, rapid tremor of the right upper extremity, most pronounced in the hand, which had made its first appearance, without known cause, a month before, ceasing after a week and being resumed after an interval of three weeks. The movement was least marked during rest, and appeared to be increased on voluntary movement. It ceased during sleep. No derangement of sensibility and no limitation of the visual fields could be made out on superficial testing. The dynamometric was 6 on the right and 23 on the left. The knee-jerks were feeble. The mother of the child was distinctly neurotic. The little patient herself had four attacks of chorea, two involving the right side and two the left, the first at the age of six years, and the last at the age of nine.

Under date of June 21, 1897, it is noted that the tremor has disappeared and reappeared thrice since the previous record. Both the girl and her mother consider her well at present, although on investigation it is found that the right hand is tremulous when extended, and inquiry reveals the fact that the shaking appears on excitement or after muscular activity, but only, or at least only in marked degree, in the right hand. There was no impairment of painful sensibility.

This case illustrates one of the forms of motor disturbance that may attend hysteria. In addition to simple tremor there may be choreic, or tic-like movements, or spasm or convulsion, or paralysis or paresis.

CASE VIII.—In conclusion, I wish to refer briefly to a rather remarkable case, in a girl of sixteen and a half years, in whom hysterical manifestations had been present for three years or more. The patient's mother was distinctly neurotic and the father suffered probably from some organic disorder of the brain. At the age of thirteen, after some opposition, the girl fell to the ground and became rigid and blue, and so remained for perhaps half-an-hour. Subsequently she wept. In the following year she felt certain vague sensations, with perhaps some perversion of consciousness, after witnessing an accident in the laundry in which she was at the time employed. Some months later she was found wandering about at a distance of some six miles from home, and another month later at a distance of eighteen miles or more. Menstruation set in shortly after this last escapade and recurred irregularly with pain. At about this time the girl began to have staring attacks, which were attended with convulsive movements. In the following year she did fairly well, but at the end of this time she again walked away from home, a distance of eighteen miles. About a month afterward, in conjunction with some sort of seizure from which her father suffered, the girl slept for four days, taking only liquid, but no solid food. About four months later, she went irresponsively to Washington, D.C., and passed through a varied experience. Of the details of these several expeditions, the girl maintained she had little or no knowledge and only faint and ill-defined recollection. She was readily susceptible to hypnotism, and while somnolent numerous facts and incidents connected with the journey to Washington and her sojourn there for several days were elicited.

There was diminished sensibility to pin-prick upon face, hands and legs in irregular distribution. The pharyngeal reflex was preserved. From recent information, I learn that the girl was, a short time ago, found under suspicious circumstances in a not entirely reputable neighborhood, and she has been since sent to a reformatory institution. At the time the patient was under my observation I could not convince myself of the entire reliability of her statements, and I am yet unable to decide to what extent she endeavored to practice simulation or deception. I was, and am still, inclined to believe that many of the symptoms have an hysterical basis, and I would be loath to deny that the several escapades were manifestations of a form of modified consciousness. In addition to the nervous disease in her own immediate family the fact that an aunt is a mesmerist, and has exercised some influence over the patient, is not without interest.

I have, in this communication, endeavored by the report of cases to supplement what others have already done in directing general professional attention to the liability of children to suffer from hysteria, and I would further emphasize the importance of its early recognition and intelligent treatment.

My thanks are due Drs. Mitchell, Sinkler, Lewis and Brinton for their kindness in permitting me to make use of their cases.

## HYSTERIC RAPID BREATHING (HYSTERIC TACHYPNEA) WITH THE REPORT OF TWO CASES IN CHILDREN.

BY DAVID RIESMAN, M.D.

Adjunct Professor of Clinical Medicine and Therapeutics in the Philadelphia Polyclinic.

Disturbances of the respiratory function as manifestations of hysteria are not common, yet quite a large variety have been described, cough, hiccough, laryngeal spasm, and rapid breathing being the most important. Any one of these may constitute the dominant symptom, other signs of hysteria being either but slightly marked or, rarely, entirely absent. When the latter is the case, the determination of the true nature of the condition may be extremely difficult.

Abnormal slowness of respiration is not infrequent in hysteria, but is generally a subordinate phenomenon occurring in states of trance or catalepsy. I have also seen a case of very deep, sighing respiration in a girl of 12 years. The respirations were twenty to the minute, and became normal when her attention was diverted. She stated that her mother, whom I did not see, however, breathed in the same manner.

Regarding excessive rapidity of breathing, with which we are at present principally concerned, the first careful description of it was given by S. Weir Mitchell in 1883. In 1893 * he published two new cases and gave in abstract those recorded in literature up to that time. The condition is now well known and has found entrance into the text-books.

The breathing in a typical case is of the upper costal type and is unaccompanied by effort; the diaphragm moves scarcely at all; the respira-

* Mitchell, *Am. Jour. of the Med. Sc.*, March, 1893.

tion-rate varies from 70 to 100 per minute, or is even higher—in one of Mitchell's cases it was 150, and was said to have been 180. Emotion increases the frequency; in most cases the rate drops to normal during sleep. The pulse is usually not accelerated unless quickened under the influence of excitement.

That the rapid breathing is not a voluntary acceleration was shown by Mitchell by means of graphic records. When the respirations of a healthy person breathing very rapidly were recorded, the tracing was found to be irregular and quite unlike that of hysteric rapid breathing, which was rhythmic and regular.

My own cases were those of two children, one aged 9 years, who also had chorea minor, and one aged 13, in whom the respiratory disturbance was the only abnormality.

CASE I.—*Case of chorea minor with rapid breathing.*—M. F., a boy of 9 years, is one of seven children; the family history is negative; the other children are well. He had measles at 2, and his first attack of chorea at 4 years—it affected the right hand and lasted six weeks. The second attack occurred 16 months ago; the present one being two months previously in the right hand. The movements are slight, and cease entirely during sleep The submaxillary and posterior cervical glands are enlarged. The heart is rapid and the apex beat diffuse: unfortunately, I have no record of the rate. There is no murmur. The respirations are 64 to the minute, noiseless, rhythmic, and unassociated with effort. The bowels are regular; there are two minute ulcers on the tip of the tongue.

CASE II.—*Rapid breathing rendered noisy by sucking inspiration; at intervals a movement of swallowing.*—F. S., a boy of 13 years, is the second of eight children, two of whom are dead. The family history is negative. He has had the diseases of childhood, including a mild attack of typhoid fever. For about two months he has worked in a market, often lifting heavy weights. One evening he came home complaining of a choking sensation; he was breathing rapidly, but was not cyanotic. Hot drinks were administered, and the trouble disappeared entirely. For two weeks he was well, and then the symptom returned, and has persisted up to the present time (March, 1896). An operation for phimosis relieved the condition slightly, but since being startled from sleep a few nights ago it has been worse than before. The breathing is perfectly rhythmic, but is interrupted once in every 14 or 15 respirations by an act of swallowing. There is slight sucking in of the supraclavicular spaces and the suprasternal notch. Auscultation reveals nothing save a harsh inspiratory murmur. During play, sleep, and work the respirations are natural.

The boy is very excitable, his face is pale, and his whole appearance speaks of want and neglect. On the right lower lid there is a stye.

Though hysteria is quite common in childhood,* hysteric rapid breathing is very rare, and Lloyd (*American Text-Book of Diseases of Children*), in describing the symptom, only refers to the case of an adult.

* Clopatt's Statistics (quoted by Lloyd: *American Text-Book of Diseases of Children*) comprise 272 cases below the age of 15; of these, 97, or more than one-third, were under 10.

In the first boy chorea was also present, but the rapid breathing cannot be considered part of that disease—it had nothing of the irregular, jerky character of choreic movements. The second case was very clear; the cessation of the symptom during work, sleep, and play, leaves no doubt as to its nature.

How the rapid breathing is brought about is not easily explained—it is probably a vagus-neurosis, in a sense analogous to tachycardia. For this reason, and also because there is no difficulty in breathing, I have used the phrase "hysteric tachypnea," instead of the one generally employed, namely, hysteric dyspnea.

---

## THE NERVOUS LESIONS ASSOCIATED WITH CHRONIC ALCOHOLISM.

After describing the lesions of the nerve-cells of the rabbit's brain, induced experimentally by chronic alcoholic poisoning, Berkley *(Johns Hopkins Hospital Reports*, vol. vi., 1897) dwells on the points of correspondence between the lesions and the symptoms. The sensory derangement, the exaggerated sensibility of the skin, the anesthetic troubles, the ocular and auditory disorders correspond to the beginning of the vascular disturbances, when the nerve-cells, irritated by an insufficient supply of proper nutriment and excited by the presence of a poisonous stimulus, overact for the time; and then, as nutrition is still withheld from them, altered metabolism results. The beginning swelling of the dentrites of the sensori-motor region is marked by paresthetic and anesthetic symptoms, those of the purer sensory region by visual and ocular troubles, and some amnesia, especially for recent events; in other words, the cells that have the function of evolving and transmitting thought cannot work properly, and defective memory results. Later, as the motor cells are more and more involved and nuclear changes begin, continuous tremor becomes apparent, and the muscles no longer co-ordinate perfectly, unless for a moment under the direct influence of the will. Still later, when a portion of the cell-structures have become highly degenerated, and the altered cells have become more numerous, the already tottering will-power becomes more and more deadened, and memory and judgment fail; and when the degenerative process is far advanced, incomplete dementia is the final result. The fact that only a portion of the cells of the cerebrum are involved in the degenerative process does not militate against the entire conception of the pathologic entity. The nerve-elements of the brain are intricately united, one with another, by means of their axons and collaterals, and are not able to functionate perfectly unless the normal relations to one another are preserved. A lesion in one cell will induce disorders in the function of two or more cells not involved in any morbid change, the intricate system of collaterals issuing from one cell influencing directly the impressions and nervous impulses arising from many others, and in this way widespread disordered action of large numbers of the cerebral cells may be the result of disease in a comparatively few elements.

A. A. E.

# PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

H. B. ANDERSON, M.D., C.M.,
Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital. 241 Wellesley Street

H. C. PARSONS, M.D., 97 Bloor Street West.

## THE AGGLUTINATION OF TYPHOID BACILLI BY CHEMICAL SUBSTANCES.

Malvoz (*Ann. de l'Institut Pasteur*, July 25th, 1897) has investigated the action of various chemicals upon typhoid bacilli. In the first place he finds that certain bodies such as formalin, corrosive sublimate, peroxide of hydrogen, and strong alcohol, coagulate the bacilli and produce a fairly typical agglutinative reaction, but only when used in concentrated solutions. The essential characteristic of the typhoid serum in this respect is, however, its power of acting when extremely dilute, and the author's next endeavor was to find some chemical substances which should have a comparable action. Chrysoidine, which is stated by Blachstein to agglutinate cholera vibrios, was found by Malvoz to have no action on typhoid bacilli, nor was any reaction obtained with induline and nigrosine; safranine and vesuvine, on the other hand, give the typical reaction even in very dilute solutions, and the agglutination was rendered more obvious by the slight coloring of the bacilli. Thus 3 drops of a 1 in 1,000 solution of these reagents added to a 1c. cm. of typhoid emulsion produced the characteristic reaction just as the blood of a typhoid patient would. Mineral acids, phenol, lactic acid, and chloroform have no agglutinating power, while salicylic acid and strong solutions of potassium permanganate give a reaction which is by no means characteristic. Caustic soda and ammonia do not agglutinate bacilli suspended in distilled water, but act on them if in tap water, a difference no doubt associated with the deposition of calcium carbonate. Salimbeni's experiments on the part played by oxygen in agglutination are not confirmed by Lambotte. Malvoz finds that an artificial "typhoid" serum can be made by adding 1 c.cm. of a 1 in 1,000 solution of safranine to 9 c.cm. of ox-serum. He suggests that as the urine of typhoid patients gives a marked diazo-reaction, the agglutinative power of their serum may be due to a nitrogenous compound allied to vesuvine or safranine. He has further applied his discoveries to the differential diagnosis of bacteria; thus, for instance, a concentrated solution of formalin agglutinates typhoid but not colon bacilli, the difference being visible to the naked eye. Again, 1 in 1,000 safranine serum prepared as above causes agglutination of typhoid bacilli, while the colon bacillus is not affected by a 1

in 100 serum. Some further experiments tend to show that the ciliated envelope of the bacillus is the seat of the chemical changes leading to agglutination. Finally Malvoz suggests that his results may be applied clinically with advantage.—*Brit. Med. Journal.*

## A SIGNIFICANCE OF SUDDEN ACUTE ABDOMINAL PAIN.

The exploratory abdominal incision has taught us much about obscure points in the surgery of that region, and among other things has let in a flood of light upon the causes of the pain that is such a frequent and important feature of diseases of the abdominal viscera. If, at the present day, in the light of all this recently-acquired knowledge, discouragement comes sometime because of a mistaken diagnosis of an abdominal affection, what must have been the condition of things before the new era in surgery allowed the peritoneal cavity to be opened with impunity? The ignorance of that time seems almost like that of the dark ages; "inflammation of the bowels" was a sort of blanket diagnosis applied to a variety of affections very different in their character and indications for treatment, and diseases of the abdomen were considered entirely within the province of the physician, matters with which the surgeon had little or nothing to do.

The rapidly-acquired knowledge of this subject needs constant revision, and an excellent study of the significance of sudden acute abdominal pain has lately been made in an article by Dr. Byron Robinson, who, for the purpose of learning how best to interpret this symptom, investigates first its location. He says that there are three principal localities from which the pain arises, *viz.*, the pelvis, the region of the cæum and that of the gall bladder. As a rule, acute abdominal pain is referred by the patient to the region of the umbilicus, at least at first, and particularly when not associated with localized tenderness, and it is this that often makes the differential diagnosis difficult at the outset in an attack, for it is only when localized pain upon pressure begins to appear that a distinction can be made among several forms of disease attended with the general symptom of pain. In addition to the pain elicited upon pressure, another valuable localizing symptom is rigidity of the abdominal muscles, a general symptom in general peritonitis, but a local one where the affected surface is limited. This rigidity is a reflex phenomenon and serves the purpose of protecting and keeping at rest the organs in which the pathological process is going on. In some cases hyperæsthesia of the skin over the affected area is to be found in addition to the muscular rigidity, but this is not to be relied upon.

The disease most frequently met with in the ileo-cæcal region as the cause of sudden acute abdominal pain is, of course, appendicitis. In the regions of the gall-bladder the passage of gall-stones is the frequent cause, and in the pelvis the rupture of an ectopic gestation is most likely to give rise to the pain. Besides these, the affections that are common causes of the symptoms are intestinal obstruction, the passage of a renal calculus and movable kidney. The last named trouble should by no means be for-

gotten, although it is only lately that any significance has been attached to it as a cause of serious symptoms.

The character of acute abdominal pain is unfortunately seldom such as to aid in making a diagnosis of its origin. The difference noted is usually in the degree rather than in the nature of the pain, although in a general way a distinction is to be made between the paroxysmal and periodic pain of strangulation of the bowels, and the sudden, acute, lancinating and continuous pain of a perforation of the digestive tube, the pain in this case announcing the establishment of a general peritonitis.

The want of a guide from the character of the pain gives added value to other aids which must be called in to help in the diagnosis. Mention has already been made of the location of the pain by the sensations of the patient, by the touch, by the rigidity of the muscles and by the hyperæsthesia of the skin. An additional point may be gained by applying the doctrine of probabilities and taking into account the age, sex and previous history of the patient. For instance, sudden, acute abdominal pain in an infant or young child will probably be due to an invagination of the bowel. This will be all the more probable if the intermittent, colicky nature of the pain can be detected, and the appearance of blood in the stools will make the diagnosis certain. It is to be remembered that shock is quite conspicuous in these cases and that the evidence of acute pain may be masked by it after the onset of the attack. Abdominal tumor is often wanting in this affection.

In boys or young men, sudden, acute abdominal pain will probably be due to appendicitis. In women, during the childbearing age, the rupture of an ectopic gestation must be one of the possible causes for consideration. But, with all the aids he can bring to bear upon the diagnosis, the physician will too frequently find himself confronted by an attack of pain which he cannot explain. Fortunately, in these days he has one thing to fall back upon that seldom fails to clear up the case; that is, the exploratory abdominal incision. Given a case that is at once grave and obscure, and the exploratory incision is imperatively demanded, *provided it can be made by an expert.* Operation by the inexperienced man is little, if any, to be preferred to expectant medical treatment, for although the danger from the operation, *per se*, when made by a man of modern ability, is undoubtedly less than the danger from the disease, it must be remembered that the condition present is often one that can be detected only by an eye and touch that have had long training in the work, and that the necessary operation can be successful only in hands skilled by long practice.—*Northwestern Lancet.*

## THE CURATIVE POWER OF FEVER.

A. Lowey and P. F. Richter *(Berliner klinische Wochenschrift*, March 1, 1897) energetically defend a view now held by a large number of clinicians that fever in acute infectious diseases is one of the weapons of defence possessed by the animal body. In proof of this they detail a series of experiments on rabbits, consisting in the production of high temperature

by the "heat-puncture," *i.e.*, by injury to the copus striatum and subsequent inoculation of the animals with the minimal lethal dose or its multiple of pneumococcus, hog-cholera (Schweinerothlauf), and diphtheria. The results showed that the animal in which fever had artificially been produced lived longer than the controls; some, indeed, survived the infection.

Although indicating the curative power of fever, the authors do not oppose the proper use of antipyretic measures, when these have favorable incidental effects (quieting the nervous system, etc.). But they add, it may be profitable to search for pyretic agents, *i.e.*, such that evoke an artificial rise of temperature.

---

V. Babes and V. Sion.—A case of pyosepticæmia consecutive to a gonorrhœal infection, (*Archiv. des Sciences Méd., 1896, No. 6.*) A young man giving a previous history of several attacks of gastro-intestinal trouble, associated with jaundice, became infected with gonorrhœa. After twenty days there was a cystitis and epididymitis, and later, fever, vomiting, jaundice, hæmorrhagic points in the skin, bloody diarrhœa, pain in the joints, with enlargement of the liver and spleen.

At the outset the temperature was from 38 to 38.5, rising after the second day and ranging from 38.7 to 39.7. There was a double—systolic and diastolic—murmur ts be heard in the aortic region which was transmitted over the entire cardiac area. Delirium, anurea and œdema also set in.

At autopsy was found maceration and beginning gangrene of the skin of the scrotum, penis, and lower part of the abdomen. The aortic valves showed an ulcerative endocarditis. There was atrophy of the liver with biliary degeneration, and hæmorrhagic infarcts in the kidneys going on to a condition of suppuration.

From the spleen and kidneys streptococci and staphylococci were cultivated, while in the ulcerated aortic valves gonococci were found, which, however, did not grow on ox-blood serum, agar, or gelatin.

The general infection was evidently the result of the invasion by streptococci and staphylococci, while the endocarditis is referable to the presence of the gonococci. It is thought that the former biliary attacks aided the generalization of the infective process.

---

**SANMETTO A STANDARD MEDICINE.**

I have had occasion to use a considerable quantity of Sanmetto in bladder and urethral troubles, and have so far invariably found it equal to the occasion. It is assuredly as much a specific for the various ailments of the bladder and its appendages as quinine is for ague. That is saying a great deal; but it is true. Sanmetto is certainly a standard medicine, and deserves every confidence of the physician. I shall continue to use it in my practice with perfect confidence in its great merit.

Lochland, Ky. Jas. T. Atchison, M.D.

# NOSE AND THROAT.

IN CHARGE OF

J. MURRAY McFARLANE, M.D.,
Laryngologist to St. Michael's Hospital. 32 Carlton Street.

D. J. GIBB WISHART, B.A., M.D.C.M., L.R.C.P.L.
Professor of Laryngology, etc., Ontario Medical College for Women; Lecturer in Laryngology and Rhinology, Trinity Medical College; Rhinologist and Laryngologist to the Hospital for Sick Children, St. Michael's Hospital, and the Girl's Home; Toronto General Hospital 47 Grosvenor Street.

## INFLUENCE OF ADENOID VEGETATIONS ON THE GROWTH AND CONFIGURATION OF THE UPPER MAXILLA AND THE NASAL SEPTUM.

BY J. W. GLEITSMANN, M.D.,
Professor of Laryngology and Rhinology, New York Polyclinic.

The subject which I submit to your consideration this evening has, in my opinion, not received the attention it deserves, and although I am not able to present new or original ideas and facts, I bring this matter before the Section for two reasons: A due appreciation of these conditions and their consequences will in many cases influence our action, which otherwise may be tardy, and may be postponed to the detriment of our patients. Further, although the subject has been alluded to as early as 1876, by Continental writers (Michel), and 1885, by the late Jarvis, of this city, the dissemination of the knowledge of this anomaly seems to me to take an unusually slow course. The text-books of our specialty, with very few exceptions, mention the matter either not at all, or devote only a few lines to it. The most recent and elaborate handbook of Heymann contains in the article on "Deviations of the Septum," by V. Lange, only the statement that a high-pitched palate may exert a deleterious influence on the nasal septum. In contrast to this assertion is a statement made by one of our members, Dr. Delavan, in the transactions of the American Laryngological Association, 1887, viz., a diagnostic sign of a habitual mouth breather in a high-arched, narrow, hard palate, associated with deflection of the nasal septum.

In order to understand more fully the changes brought about by adenoid vegetations, it is advisable to analyze briefly a few other conditions which have been held responsible for producing abnormal growth of the palate and the superior maxilla. Jarvis, with his intuitive mind, very correctly recognized and associated a high-pitched and narrow palate with a deviated septum. Observing this condition in several members of families, which came under his notice, he inferred that it was a hereditary manifestation. Although the congenital influence on certain types of

noses, or on the formation of the face, cannot be denied, it certainly plays a minor part in the present subject; and, knowing how frequent obstructions of the post-nasal passages are found in children of one family, this factor cannot be left out of consideration. The higher degrees of abnormal growth also develop, as a rule, several years after birth. The same author, very properly, refutes the influence of scrofula and rachitis in this connection, which latter affection has even in a recent publication been held accountable for malformations of the upper maxilla. The lesions due to rachitis occur generally in early infancy, and manifest themselves more in the lower than in the upper maxilla. Finally, an affection which produces similar symptoms is occlusion of the choanæ; but also here we observe a difference in the shape of the maxilla, which will be pointed out later on.

The first time my attention was drawn to a high arch of the palate in conjunction with malposition of the teeth was in a child seven years of age, from whom adenoid vegetations had been removed by another physician with the curette two years before. The child had well-to-do parents, who were very solicitous of is welfare, and observed all symptoms most carefully. The previous operation improved the child at the time, restoring nasal respiration; but the benefit gained was soon lost, and about a year before I saw it the old trouble reappeared and grew worse, till the child was in the same condition as before the first operation. The removal of the growths was this time done under narcosis with the post-nasal forceps, was most thorough, and did not present any unusual features. But I saw at once, and also the parents had noticed it before, that the hard palate was elevated to the highest degree; further, that the upper jaw presented the form of a V-shaped maxilla, formed an angle in front instead of the usual curvature, and that the teeth were crowded so much out of position that, there being not enough space for them, two incisors were standing back instead of next to each other. At that time I was not cognizant of the investigations of Koerner, and thought in vain for an explanation of this anomaly in so young a child. These exquisite malformations I have seen only in a small number of children, whilst I found a high-pitched palate with deviated septum more frequently. It seems that such a condition of the maxilla and teeth is not as rare on the Continent as with us—possibly because we may not have bestowed as much attention to it heretofore—possibly because the people here are more inclined to bring their children with their so-called catarrh to one of our numerous dispensaries, in which the large number of rhinologists are ever ready to operate on adenoid vegetations. Their early removal may also account for the infrequency of the higher degree of malformations.

We will now analyze more fully the conditions dependent on the presence of adenoid vegetations. Koerner, and after him Waldow, whose statements I shall follow here chiefly, made very careful examinations on the dead and living subject, and the results of their investigations are as follows: Koerner was the first to point out that two degrees of configurations of the maxilla have to be distinguished, dependent upon the presence of adenoid vegetations, before or after the second dentition.

When nasal respiration is impeded in a growing child during a larger period by adenoid vegetations, the palate assumes a higher elevation in course of time, and appears in a section dome-shaped instead of a slight curvature. The alveolar process, which in the normal bone is a semi-circle, forms now an ellipse, and the lateral parts approach each other. Consequently the antero-posterior axis is elongated, the lateral one shortened, but nowhere an angle or bend can be observed anteriorly. The whole growth of the maxilla seems to be retarded, but the milk-teeth are in their normal position. Such are the conditions which the authors named found to take place when adenoid vegetations are present before the second dentition, and in cases of occlusion of the choanæ. They assert, and support their statement by observation on the living subject; but both are unable to give satisfactory reasons why the following more aggravated form does not occur in occlusion of the choanæ, persisting after dentition. The assumption advanced that adenoids produce a change in the bony substance, especially of the upper maxilla, appears to me nothing better than a hypothesis. I, myself, can remember only one case of choanal occlusion in children, and this at a time before my attention was directed to this subject.

By far more pronounced and of greater importance are the changes the maxilla undergoes after the second dentition, when the adenoids have not been removed previously. The alveolar processes approach each other still further, the palate becomes still more elevated, and in some cases, instead of being dome-shape, appears as a pointed arch. The anterior part of the alveolar process relinquishes its vertical position, becomes inclined forward, an angle forms at the median juncture, and the maxilla assumes the V-shaped form so well known to the dentists. This change in the shape of the upper maxilla has a far-reaching influence on the position of the teeth. The median incisors are turned in their axis, and the lingual surfaces stand opposite each other. The position of the other teeth depends greatly on the shape of the maxillar bone. If the nasal obstruction has taken place shortly before the second dentition, the maxilla retains its usual size, and all the teeth can find their natural position. But if the growth of the bone has been retarded, there is not enough space for the teeth and they are crowded out of their normal place. The lateral incisors are pushed inwardly, also often the bicuspids, whilst the molars turn generally outwardly. As the lower maxilla had not undergone any changes meanwhile, it often happens that the outer edges of the upper bicuspids strike against the inner ones of the bicuspids of the inferior maxilla.

A further consequence of the elongation of the antero-posterior axis of the upper maxilla, and of the oblique position of the incisors, is in some cases the impossibility of perfect approximation of the teeth of both maxillas anteriorily, the upper incisors protrude beyond the lower ones, and the upper and lower front teeth fall short of meeting each other. The V-shaped form of the upper maxilla, and the anomalous position of the teeth resulting from it, has been familiar to the dentists for many years past, and ingenious devices have been brought forward and adopted to correct the deformity. As this feature does not pertain to our work I

shall not enter into further details, but turn my attention to the influence these conditions have on the nasal septum.

The observation that a high-arched, narrow palate is associated with deflection of the nasal septum seems to be a condition so generally acknowledged now by scientists as to need no further argument. The septum is destined to serve as a prop, pushing apart the upper maxilla from the base of the skull, and when it is crowded upward by the hard palate until it can no longer resist the pressure brought to bear upon it, deflection results (Delavan). Now, it is a known fact that septal deviations are a rarity before the seventh year, and Koerner never saw one before the second dentition, while it was present in all his cases after this period. If the foregoing statements and the conclusions derived are accepted as correct, the assertion will not appear presumptuous that adenoid vegetations play an important role in the causation of septal deviations, and have to be considered an important etiological factor.

Before concluding it behooves me to answer the very natural inquiry for an explanation of the development of these morbid changes. Two reasons are advanced by the authors on this subject, both of which appear to me feasible and rational. When nasal respiration is impeded, the growth of the nose is retarded, which we see also in other organs whose functions are permanently interfered with. The nasal cavities remain smaller, and the palate becomes elevated. This condition has also been previously observed in enlargement of the faucial tonsils, necessitating mouth breathing, before the discovery of Wilhelm Meyer; but knowing the frequent concomitant occurrence of both affections, we may rightly consider the adenoid vegetations as the real etiological cause.

The second, and, in my opinion, by far the more important factor, is the lateral pressure which the cheeks exert against the maxilla when the mouth is kept open. Already before dentition this pressure produces in long-standing mouth breathers a narrowing and lengthening of the alveolar process. After the change of teeth its effect is still more pronounced. During this period the alveolar processes approach each other more closely, the maxilla becomes elongated in its longitudinal axis, suffers a bend at its anterior junction, in consequence of which the palate rises still higher, and the V-shape of the maxilla makes its appearance. Whilst these changes occur in the upper maxilla, the lower one retains its natural form. When the mouth is closed the tongue fills the buccal cavity and lies close against the teeth, the alveolar process and the palate. In this position it exerts a pressure against the lateral part of the maxilla, counteracting that of the cheeks. When the mouth is open the tongue lies in the lower maxilla, and no pressure is exerted against the upper maxilla. To explain the greater influence of the pressure of the cheeks against the upper maxilla during dentition, Koerner assumes that the maxilla loses its firmness through the loss of the milk-teeth, and becomes softer in consequence of the greater influx of blood during the growth of the permanent teeth. The rapid development of the major changes seems to be favored by the weakening of the junction of the maxilla bone anteriorly, which accounts for the V-shaped configuration of the upper maxilla.

Although I may not have been able to prove all the facts stated to your satisfaction, I think at least to have shown the necessity of an early removal of adenoid vegetations, if we wish to avoid the unpleasant consequences described. The subject is, in my opinion, certainly important enough to engage your attention and to merit further investigation.—*New York Polyclinic.*

---

## TREATMENT OF ANOSMIA.

Bibard has recently taken up the study of this subject (*Thèse de Paris*, 1897). Among the causes of anosmia he refers to blows on the head, which are much more frequent than is generally supposed as a cause of loss of the sense of smell. They may or may not be accompanied by fracture, for according to the author's observations a severe blow on the back of the head, as from a fall, is quite capable of causing laceration of the Schneiderian membrane or tearing of the olfactory nerves in their passage through the lamina cribosa of the ethmoid. In cases of essential anosmia without nasal lesion the author has found the following treatment produce good results: Nasal irrigation every morning with warm water by means of Weber's syphon; to snuff three times the following powder: Sulphate of quinine, 10 cg.; subnitrate of bismuth, 10 g.; thirdly, electricity. In cases of hysterical anosmia the last is the most effective, and is employed in the form of faradisation to the root of the nose, and this must be employed so as to produce actual pain.—*Brit. Med. Jour.*, Sept. 11, 1897.

---

AN ADDITION TO THE TREATMENT OF NERVOUS PRURITUS.—Pruritus is so frequent a disorder, and is attended with so much suffering, both physical and psychical, that, although but a symptom, it often assumes the importance of a disease. It is, therefore, of interest to note that Dr. Wannemaeker, of Ghent (*Belgique Medicale, Col. and Clin. Record*), who has recently written an instructive article on the pathology and treatment of pruritus, has suggested a new remedy for obstinate cases of this affection. Starting out with the idea that carbolic acid taken internally seems to act directly upon the phenomena of pruritus, he has, in addition to the appropriate local and dietetic treatment, for some time made use of salophen, which is a combination of salicylic acid and acetylparamidophenol. Aside from a few failures, this drug has yielded some results which, in the author's opinion, are very encouraging, and some which are very suggestive. Whether the favorable influence of salophen is attributable to the anti-arthritic action of its salycilic component, or to a sedative effect upon the nerve terminals, or to that of an antitoxine, remains questionable. The cases cited as illustrations of its efficacy as an antipruritic comprise prurigo, psoriasis in a gouty subject, pruritus in diabetes, eczema in a gouty person, and chronic urticaria occurring in attacks. The dose was usually large, ranging from four to five grammes daily. In summing up his results the author concludes that in certain conditions, which cannot as yet be defined with precision, salophen offers a resource which should not be neglected by the physician who is anxious to relieve these unfortunates.

# PAEDIATRICS.

IN CHARGE OF

ALLEN M. BAINES, M.D., C.M.
Physician, Victoria Hospital for Sick Children; Physician, Out-door Department Toronto General Hospital. 194 Simcoe Street, and

J. T. FOTHERINGHAM, B.A., M.B., M.D., C.M.,
Physician, St. Michael's Hospital; Physician, Outdoor Department Toronto General Hospital; Physician, Hospital for Sick Children. 39 Carlton Street.

---

Mr. R. Clement Lucas in *British Medical Journal*, Jan. 30, '97, gave a memorandum that should be very useful in cases of extreme cellulitis and œdema following vaccination. He points out that with the present day method of direct calf-lymph vaccination this complication is more common than in the old arm-to-arm vaccination. He advises that if general symptoms are severe, and the pustules tend about the twelfth day to become confluent, the axillary glands to enlarge, and the œdema to be excessive, the pustules should be freely dusted with iodoform and a dry, sterile pad be placed over them to prevent friction and to keep the powder in place. This, he says, checks the process in twenty-four hours. It cannot be objected that the immunizing effect of the vaccination is thereby prevented, as it might be if the pustules were so dressed on say the sixth day. And the local effect must be much better than dressing with poultices or any moist dressing, even as healing under a scab is better than by an open sore.—J. T. F.

---

Condensed Milk in Infant Feeding.—The writer's experience would not lead him to attach much importance to this article of infant dietary, as in this country it is very little used. In the larger cities and among the poor, where ice and sweet milk are forbidden luxuries, the use of condensed milk is a necessity, and with proper safeguards intelligently laid down by the physician it becomes an inestimable boon. So that we see it rather largely discussed, especially in August and September issues, by most of the American Journals of Pædiatrics. At the June meeting of the American Medical Association, before the Section on Diseases of Children, C. G. Kerley, of New York, discussed the question in a very thorough, practical way. Briefly his positions and conclusions are these: The infant must be provided with a substitute as nearly like average mother's milk as possible, that is, it must contain 3½ to 4 per cent. fats, 2 per cent. proteids, and 7 per cent. sugar. Now, condensed milk, when diluted, as it usually is and must be to ensure retention by the child, to one part in twelve or fourteen, has only one-eighth the fat and one-third the proteids of normal breast milk, and about one-half the sugar, cane sugar at that. It is, therefore, manifestly unfit for exclusive or continuous use. Few children can take it of the strength of one part in six without indigestion and colic. Up to the third month, indeed, many

children do well on it, as the carbohydrate matter is sufficient under the then existing conditions of the infant's life to produce heat enough, and very little proteid is enough. After that age, however, a tendency to rickets, marasmus, or scurvy appears so frequently as to leave no doubt as to the connection of the diet with the affection. Dr. Kerley well describes such children as "An ill-conditioned class of children, with their starved muscular and nervous systems, and catarrhal tendencies, who fall an easy prey to broncho-pneumonia in the winter, and to the gastro-intestinal diseases in the summer, and to the infectious diseases during the entire year."

In the recognition of the limitations of condensed milk lies the safeguard. It is very easy to add the necessary fat, either cream added to the one in twelve dilution, or cod-liver oil in quantities from ten drops to a drachm, according to age, three times a day after feeding. It must be thought of as a food, not as a medicine, and diminished or discontinued in hot weather or if intestinal dyspepsia appear. As to proteids, they may be readily supplied in ways that will suggest themselves. For instance, a weak beef tea may be used at times, in proportion of one part milk in nine, as the menstruum for the condensed milk. Or small quantities of red dish gravy may be given as the child approaches six months of age, and the valuable lean bone or tough strip of lean steak to suck.

In *Arch. of Pædiatrics*, Aug., 1897, a useful résumé of Kerby's article is to be found. It is a little amusing to find one commentator on the subject saying that the chief objection to condensed milk is that it "contains a deficiency of proteids," and further on, again speaking of an "excessive deficiency." "English as she is spoke," surely.—J. T. F.

---

Bedford Brown, of Virginia, at the Philadelphia meeting of the American Medical Association in June last, read an interesting paper on the use of stimulants such as Strychnine, Atropine and Alcohol, in the resuscitation of still-born infants. Excerpts are as follows:

In all cases of still-born infants, whether the infant be dead or only still-born, the author's method is to insert in each arm by hypodermic syringe four or five drops of whiskey and a single drop of tincture of belladonna. If the infant is only still-born the nervous and circulatory system will respond quickly and promptly to the stimulant action. If the infant is dead beyond resuscitation there will be no response whatever. But if there is no response, or a very feeble response, he goes still further by injecting a drachm or two of warm, sterilized water under the skin, and about two drachms with a drop of aromatic spirits of ammonia into the intestine, and then awaits the result. In his experience, if these measures fail to produce reaction, it constitutes a fair test of the existence or absence of vitality. If the temperature continues to decline in the body of the infant while these measures are in progress, we may rest satisfied that the vital spark has taken its flight.

The first indication of a response to the action of the hypodermic remedies in these cases of profound asphyxiation is very soon present after the hypodermic. The muscles of the eyelids contract, and the eyes, previously closed, suddenly open; then the respiratory muscles are brought

into rapid action, the glottis is expanded, air is inhaled into the lungs and suddenly exhaled, forming the shrill cry of the new-born infant.

These phenomena illustrate to us the energetic action of the stimulants on the great nervous centres, the brain, medulla and spinal cord. Then follows the development of cardiac action and pulsation at the wrist, which were previously dormant. In these cases he has always observed the development of reflex action in the respiratory nerves before that of cardiac action. Invariably following restoration of respiration there was development of cardiac action; they followed each other as cause and effect.—*Arch. of Pæd.*

---

Danger of Insufflation of Powders in the Ear.—Grunert's warning against the careless insufflation of powdered boric acid in purulent middle ear disease should be carefully taken to heart by the general practitioner. According to him the danger in using powdered boric acid consists in the formation of crusts in cases where the discharge is *scant.* This is particularly often the case in the most dangerous variety of ear disease, thus sealing up a small perforation. It is better for such as are not proficient in the use of the head-mirror, and for that reason will not be able to recognize the contraindications for the use of powdered boric acid, to eschew this remedy altogether, as they might do more harm with it than good.—*Pediatrics.*

---

Night Terrors.—Braun, after critically discussing the existing theories on *favor nocturnus* in children, declares it to be a disease by itself, which is closely allied to the conception of neurasthenia, i.e., "an irritable weakness." Following this, a description of the characteristics of the attack and their demonstration is given. The sudden jumping up of the infant out of its sleep—symptomatic especially in cholic—has no relation to night terrors. The etiology as well as the treatment is that of neurasthenia, and the latter should be pointed in the direction of nutrition and education.—*Der Kinderarzt, 1897, Pediatrics.*

---

Chocolate Emulsion of Cod-Liver Oil.

| | |
|---|---|
| Chondrus mucilage, N.F. | 5 ozs. |
| Cod-liver oil | 8 ozs. |
| Glycerin | 2 ozs. |
| Cocoa, powdered | 1 dr. |
| Vanilla tincture | 3 drs. |

Rub the cocoa with the mucilage, and heat until a uniform mixture is obtained. When cold, add the cod-liver oil and glycerin, and beat up with an egg-beater.—*W. A. McIntyre, Practical Druggist.* (*Pediatrics.*)

---

Headaches: Those of nasal origin (*Med. Summary*) are commonly present in the morning on awakening; those due to eye strain come on later in the day and after using the eyes.

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* Dr. J. L. Davison, 20 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* Dr. G. P. Sylvester, Business Manager, 585 Church St,, Toronto.

**The Largest Circulation of any Medical Journal in the Dominion.**

## Editorial.

### REMARKS ON SPINAL IRRITATION.

The following is an abstract of a paper in *Medicine* by Dr. Hugh T. Patterson :

The pain and tenderness along the spine commonly known by this name have nothing to do with the spinal cord or its membranes, or with the spinal column, except that these structures happen to lie beneath the dorsal surface. To explain that some organic diseases of the spinal cord and its membranes as well as lesions of the vertebræ are attended with pain and tenderness in the back were a work of supererogation. Few would group outspoken cases of this character under spinal irritation; but still there is a tendency to consider the pain and sensitiveness along the spine that are so exceedingly frequent in nervous people as a morbid entity, or at least a distinct unit in the group of conditions that constitute a case of neurasthenia, hysteria or hypochondria, or they are considered as an added element—a complication of the case.

My principal object in presenting the subject is to insist that so-called spinal irritation is *not* due to congestion or anemia of the spinal cord; to a state of altered nutrition in the cord; to a neurosis of the spinal arteries; to a thickening of the spinal membranes; to exhaustion of the gray matter of the cord; to an affection of the nerve roots or nerve trunks; to thickening or irritation of the vertebræ; to irritation of the spinal ganglia; or to any other permanent condition or process in the back whatsoever. In registering this protest against an impossible nosology and one that was always gratuitous, I shall support it by calling attention to only one trait of one symptom—namely, a rapid shifting of the tender points. These hyperesthetic spots are sufficiently familiar to every one. Some authors state that they are most frequent over the lower cervical spine, others find them oftener in the dorsal, and others again in the lumbar or lumbo-sacral region. As a matter of fact no point from the external occipital protuberance to the tip of the coccyx is exempt. Sometimes they are directly over the spinous processes, sometimes at the side of

them—it depends almost entirely on accident or the examiner. There may be sensitiveness along the entire spine; then there are places of maximum tenderness. The sore points are notoriously inconstant in degree of tenderness and in location, but it seems to be not generally known that the patient can locate them only about as accurately as a well person can locate a spot on his back previously touched. If a normal person be stripped and any given spot on the back be firmly pressed with the finger or the rubber tip of a pencil, after five or ten minutes he will ordinarily be unable to indicate exactly where the spot is; in other words, the healthy sensorium, or the normal function of reception and recognition of sensory impressions, is accurate only within certain limits.

Now to pass to the pathological condition under consideration. Having definitely determined—as gently as possible—that certain points are decidedly more sensitive than the surrounding area, they are lightly marked with a soft pencil and the examination is then directed elsewhere —chest, abdomen, extremities, etc.—for five or ten minutes. The same procedure of locating the painful places is then repeated, and it will ordinarily be found that the tenderness has moved up or down and the point formerly tender will now be no more sensitive to pressure than its surrounding area. The tenderness could not be due to anything abnormal at the place of "irritation" (*i. e.*, the tender spot), else pressure the second time on the same spot would be just as painful as the first time and, furthermore, we cannot possibly suppose a pathological condition to have developed within the short space of five or ten minutes at the place to which the hyperaglesia shifted—*i. e.*, the second painful point. The inference is inevitable that the pain on pressure is itself due to the perverted mechanism of sensory reception and registration in the brain, or, what is much more likely, to a perverted reaction of still higher centres —constituting a vicious consciousness. As a study of the particular psychic process involved would be trenching upon topics beyond the daily wants of the general practitioner, it shall not now concern us. The dicta, not entirely without exception, which I wish to enunciate are:

1. In so-called spinal irritation there are tender points along the spine.
2. These points can be definitely located.
3. It can be shown that they absolutely change position within five or ten minutes.
4. Such shifting demonstrates that the disease, so far as the tender points are concerned, is entirely functional and located no lower than the cerebral cortex.—*The Atlantic Medical Weekly.*

---

Hot-air Treatment of Gout and Rheumatism.—This was the subject of a paper presented by Dr. A. Graham Reed at a meeting of the Philadelphia County Medical Society, held on April 28th, (*N. Y. Med. Jour.*) Dr. Reed said he had had constructed a copper cylinder having many advantages over those seen in the London hospitals. With this American apparatus he was able to supply and easily regulate hot, dry air ranging as high as 320 degrees F. and even higher from forty to sixty minutes, that being the time allowed for a single treatment. The temperature of the body in some cases remained normal, or nearly so, and in

others varied up to 100 degrees. The pulse varied from 80 to 104, the latter the highest he had yet seen.

The first effect was upon the peripheral circulation and the terminal nerve filaments in the skin. Under the stimulus of the hot air, the cutaneous blood-vessels first contracted and then relaxed, thus causing profuse diaphoresis. The circulation was enormously increased and the color of the skin became a vivid red. Pain and stiffness were greatly diminished, and in time entirely relieved. The anodyne effect was very great at a temperature of 300 degrees and upward. Many preferred it at that height as being so comfortable.

When fibrous articular adhesions had formed speedier relief was found by breaking them up under chloroform and then applying the heat. He had not yet seen any injurious effects from this treatment, but he had seen cripples give up their crutches and useless hands become useful. Pain and effusions had disappeared, and even parts not directly treated had been in a measure relieved.

It was greatly a matter of patience and perseverance, and intelligent appreciation on the part of the patient, and of his or her proper management, attention to diet and daily habits by the physician. Miracles must not be expected; nature took time for her recuperative processes and the patient must be made to understand.

---

Thoughts of Leading Medical Lights.—The *Med. Summary* gives the following:

When a woman frequently aborts and no cause can be found, give her anti-syphilitic treatment.—Parvin.

Gynecology is as much surgical as medical practice, probably a great deal more so; and the modern gynecologist who may not handle a knife is very much like the modern soldier who is prohibited from using gunpowder.—W. S. Playfair.

Glycerin has decided power in preventing fermentation in the stomach. —Bartholow.

Chorea that cannot be controlled justifies the induction of abortion.—Lusk.

The increase of tapeworms is attributable to the increased amount of raw and very rare beef eaten.—Bartholow.

It is held that the discharge from jequiritic ophthalmia may infect healthy eyes.—Shoemaker.

One full dose of picrotoxine, 1-40 grain, at bedtime, is sufficient to control the night sweats of consumptives.—Caldwell.

The true use of a porous plaster is to retain the back in its proper position and let the pain crawl out the holes.—A Milwaukee Druggist.

Permanganate of potash as an excitant of the menstrual flow is, I think, the best emenagogue which has yet been discovered.—Thomas.

The obstetric forceps is probably the most life-saving instrument that surgery has ever invented; the only real improvement made in the obstetric forceps since the days of Smellie & Levret is that of Tarnier.—Thomas.

Cold Baths in D. T's.—Lettule (*"Centralbl. fur Ges. Ther.;" Med. News*) recommends as a sedative in delirium tremens a cold bath of 65 degrees F., the patient being immersed in the water to his shoulders, while water of the same temperature is poured over his head. In a severe case in which large doses of morphine subcutaneously and chloral by the mouth had failed to give sleep in two days, and death was expected, a bath of the temperature of 65 degrees F. increased in the first three minutes cyonosis and excitement. In six minutes the aspect of the patient completely changed. His excitement disappeared, he seemed to awake from a dream, asked where he was, drank eagerly two glasses of warm wine, and wanted to sleep. He was placed in bed and immediately fell asleep. The following day, on account of recurring excitement, it was necessary to repeat the bath four times. There was no further delirium and the patient recovered. In a second case it was necessary to leave the patient twelve minutes in the bath, when as suddenly as before there was quiet, thirst and a desire for sleep, followed by complete recovery in two or three weeks.

---

The Anticipation of Post-Partum Hemorrhage.—Atthill (*Br. Med. Jour.*) expresses the opinion, based upon a long experience, that ergot, given alone or in combination with strychnine, may be taken by pregnant women in the usual doses for a considerable time, with absolute safety to both mother and child. When taken continuously for not less than three weeks prior to labor, it tends to delay the setting in of uterine action. Its exhibition for some weeks prior to the commencement of labor arrests the tendency to post-partum hemorrhage and facilitates the involution of the uterus, thus also lessening the chance for the occurrence of subsequent uterine troubles, many of which depend upon imperfect involution. Employed in this manner, ergot will not bring on premature labor or induce abortion unless uterine action has been previously set going. In cases of threatened abortion such administration of ergot frequently seems to act as a uterine tonic, and in some cases tends to avert the danger of miscarriage, provided the ovum be not blighted. If, however, the ovum be blighted, and especially if it be detached, ergot usually hastens its expulsion.

---

The Code in Brief.—Says Dr. H. C. Wood, *Med. Age:*—"Consider every member of the profession as one of your own family, and having an inherent right to your medical services, but do not abuse this right; consider any discovery or invention you may make as belonging to the general profession; never in any way laud your own medical skill or attempt to supplant in public or private estimation one of your medical brethren; join as soon as may be the incorporated companies of your fellows for scientific and social intercourse, and for the cultivation of that professional conscience which often binds men more closely than their personal sense of right and wrong: through good and ill report, stand by members of your own profession, unless they be guilty of moral evil."

THE ACTION OF ERGOT ON PREGNANT WOMEN.—Dr. Atthill in the *Bri. Med. Jour.* refers to a number of cases in which he prescribed ergot combined with strychnine for patients in whom he feared post-partum hæmorrhage. It was given some days before labor set in.

It has been, he says, his invariable rule to employ this treatment in all cases in which there was reason to fear the occurrence of hæmorrhage, and the results have been most satisfactory. He states that he has never had occasion to regret its employment, and has never observed any injurious effects on either mother or child, although the ergot was taken regularly for five or six weeks before labor set in. These cases, he thinks, are sufficient to prove to his satisfaction, at least, that ergot, alone or in combination with strychnine, may be taken with absolute safety to both mother and child by pregnant women, in the usual dose, and for a considerable time. When it is taken continuously for not less than three weeks prior to labor, it tends to delay the setting in of uterine action, and does not bring on labor in a case in which uterine action has not already been excited. Its administration for some weeks prior to the beginning of labor arrests the tendency to post-partum hæmorrhage, and facilitates the involution of the uterus.

Dr. Atthill mentions also some cases of threatened abortion in which he used ergot, and states that he now invariably administers it to women threatened with abortion. In summing up the whole subject as to the action of ergot combined with strychnine, he gives the following conclusions as the result of his experience:

1. When administered previous to the termination of pregnancy in the case of women in whom a tendency to post-partum hæmorrhage is known to exist, it tends in a marked manner to prevent the occurrence of hæmorrhage.

2. When so administered in ordinary doses, it does not produce any injurious effects on either mother or child, and it seems to delay the beginning of labor in such cases.

3. It tends to make the involution of the uterus more perfect, and lessens the chance of the occurrence of subsequent uterine troubles, many of which depend for their cause on imperfect involution of that organ.

4. It will not bring on premature labor or induce abortion unless uterine action has previously been set going.

5. In cases of threatened abortion its administration frequently seems to act as a uterine tonic, and in some cases tends to avert the danger of a miscarriage, provided the ovum is not blighted.

6. If the ovum is blighted, and especially if it is detached, ergot usually hastens its expulsion.

---

OIL OF TURPENTINE IN THE TREATMENT OF ACNE ROSACEA.—O. Betz (*Journal des Praticiens; Medicine*) recommends inunctions of oil of turpentine in this troublesome affection. The value of the drug was discovered quite by accident, as it was given to a patient with bronchitis to rub on the chest. At the same time she was suffering from acne rosacea and rubbed the drug into the affected skin; this was followed by a disappearance of the disorder. Another case of acne rosacea that had persisted for seven years was relieved after a month's treatment.

For Croup: *The Practitioner* gives the following as a favorite mixture:

℞. Liquor morphine acetate.....3 drachms.
Dilute nitric acid.....1½ drachms.
Honey of squill.....4 drachms.
Mucilage gum Arabic.....2½ ounces.
Glycerin.....2 drachms.
Syrup red poppy.....2 drachms.
Cinnamon-and-rose-water to make.....6 ounces.

One or two teaspoonfuls five, six or seven times in the twenty-four hours. The coughing in pertussis may be similarly relieved.

---

Asthma: Dr. Murray in "Rough Notes on New Remedies" says the following has achieved the happiest results in spasmodic asthma:

℞. Tincture stramonium.....2 drachms.
Ammonium carbonate.....1 drachm.
Sodium bicarbonate.....3 drachms.
Magnesium carbonate.....1 drachm.
Powdered rhubarb.....20 grains.
Chloroform.....20 minims.
Peppermint water, to make.....8 ounces.

Half an ounce to be taken three times a day with an ounce of water.

Having thus secured a temporary lull in the complaint, the patient must be put on a course of arsenic, care being taken to give just as much as the stomach will bear. A good plan is to give Fowler's solution—five drops—with breakfast and dinner, and maintain the corrective dose with stramonium at night.

---

Menthol in Vomiting: The *Journal des Praticiens* recommends (*Therap. Gaz.*) the following treatment in incoercible vomiting:

℞. Menthol.....2 grains.
Hydrochlorate of cocaine.....4 grains.
Alcohol.....2 ounces.
Syrup.....1 ounce.

A small teaspoonful every half-hour until several doses are taken.

The following may also be used in case of the vomiting of tuberculosis:

℞. Menthol.....4 grains.
Syrup.....5 ounces.

Shake well before using and give two to three teaspoonfuls at short intervals after each meal.

This treatment is an excellent one to follow the use of chloroform-water or ice.

According to Ferrand, in some cases of spasmodic vomiting it is useful to apply the following solution to the pharyngeal wall by means of a cotton compress:

℞. Bromide of potassium.....75 grains.
Glycerin.....2 ounces.

Such an application should be made after each meal to diminish the sensibility of the pharynx.

# The Canada Lancet.

VOL. XXX.] TORONTO, NOVEMBER, 1897. [No. 3.

EDITOR:
JOHN L. DAVISON, M.D.

ASSOCIATE EDITORS:

*Surgery:*
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine:*
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology:*
J. ALGERNON TEMPLE, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics:*
CAMPBELL METERS, M.D.

*Pathology and Bacteriology:*
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat:*
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D.

*Pædiatrics:*
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M.D.

*Eye and Ear:*
G. STERLING RYERSON, M.D.
C. TROW, M.D.

*Genito Urinary Surgery:*—G. P. SYLVESTER, M.D., Business Manager

## MASSAGE AS AN OCCUPATION FOR THE BLIND.*

BY ARTHUR G. BENNETT, M.D.,

Instructor in Diseases of the Eye and Ear Medical Department University of Buffalo, N.Y.; Ophthalmic and Aural Surgeon Erie County Hospital, N.Y.

According to the census of 1890 there were in the United States 50,568 blind persons; in New York State the number was 4,398. I think we may fairly estimate that there has been at least a 10 per cent. increase in population since 1890, and with that increase a corresponding increase amongst the blind. This would make a total of nearly 56,000 persons, the great majority of whom are dependent upon private benevolence or public funds. From the twenty-eighth annual report of the New York State School for the Blind, in Batavia, I quote the following passage taken from the report of Dr. Lucien Howe, the Ophthalmic Examiner:

"The total number (of blind) in the State is 4,398. Of this entire number it is probable that only a small proportion can support themselves entirely unaided. The figures given by Supt. William B. Wait, of the New York Institution for the Blind, shows that only 7.8 per cent. of the entire blind population of the United States, even those trained in the schools for the blind, are able to support themselves; and Supt. Fuller, of the school at Batavia, informs me that 6 or 8 per cent. would be

* A paper read before the New York State Medical Association at the thirteenth annual meeting, October, 1897.

considered by him a large average of the blind of all ages in the State who are able to accomplish this."

In answer to a question bearing on this point, addressed to every superintendent of a State school for the blind in this country, I have received widely divergent estimates. The question was, What percentage of pupils, after graduation, becomes self-supporting? For some reason, not apparent, the graduates of the southern schools seem to be more fortunate in this respect than those in the north. For instance, Mr. J. E. Ray, Principal of North Carolina Institution for the Deaf and Blind, estimates that 80 per cent. of the male white graduates become self-supporting, and Mr. E. P. Becton, of the Austin Institution (Texas), puts the figures at 75 per cent. of the male students. On the other hand, Mr. Frank H. Hall, Superintendent of the Illinois Institution, estimates only 6 per cent. of the males and but 1½ per cent. of the females. Mr. E. P. Church, of Michigan, without going into figures, says that the number is "small." Mr. H. F. Bliss, of Wisconsin, puts the males at 20 per cent. and the females at 5 per cent. It is, however, extremely difficult to form any just estimate, as Mr. Hall remarks in giving me his figures. "They are almost guesses." The pupils are lost sight of in a large measure after leaving school, and no figures can be considered absolutely trustworthy. There is one point about which all the gentlemen who have been kind enough to answer my question agree, and that is that but a small proportion of blind *women* become self-supporting.

At present there are comparatively few avenues by which the blind can earn a living, and *not one* in which they can compete successfully with the seeing. In this iron age it is the weakest that goes to the wall. Blind broom-makers cannot compete with the large factories, and about the only way a blind broom-maker can earn a living is by selling his goods to charitably-minded individuals, who purchase his wares because of his infirmity. And what is true of the broom trade is also true of every trade or profession yet taken up by the blind. The element of sympathy must come into play in most instances in order for a blind person to make a living. Let me quote a few authorities. Mr. E. P. Church, of the Michigan School for the Blind, says: "No blind person can do as good work in general as a seeing person." Mr. H. F. Bliss, Janesville, Wisconsin: "Very few blind persons become expert at any line of work. An element of sympathy is necessary" (*before employment is given them*). Mr. W. B. Wait, of the New York Institution for the Blind, says: "It may be laid down as a fundamental proposition that persons who are deprived of sight cannot successfully follow any skilled employment." The majority of the superintendents who have touched upon this question find that there exists a prejudice against employing the blind.

The foregoing remarks apply perhaps with less force to the musical trades and professions than to the purely mechanical ones; but right on the threshold of this department we are confronted with the objection that all blind persons are not musical—certainly not sufficiently so to make it pecuniarily profitable for them to make music their life work. We may take it for granted, I believe, that the misfortune of blindness does not confer upon its unfortunate victim a musical ear or temperament any

more than the loss of hearing would specially fit a deaf person to become an artist. In this belief I am upheld by some of the foremost instructors of the blind in the country, notably Mr. G. H. Miller, of Kansas, who goes so far as to say: "In the education of the blind music has held a very prominent position, and its importance as an educational factor has been greatly over-estimated. The false notion that the blind are generally gifted with superior natural musical ability, is, perhaps, the principal reason why their musical education has received undue attention. What are the facts? Inherent musical capacity is certainly not above the average of the seeing, and, for reasons we cannot now present, we have no hesitation in stating that it is considerably below the average." (From a paper read at the fourteenth biennial convention of the Am. Assoc. of Instructors of the Blind, Pittsburg, 1896.) At the same meeting, Mr. Glascock, of Indiana, said: "I have had parents who thought their children were specially gifted in music because they were blind; and I know we have to curtail that feeling all the time." Mr. E. P. Church said he entirely agreed with Mr. Miller, and, in answer to a question on this subject, writes me that probably not 10 per cent. of the pupils can profitably take up music, either as a mechanical trade or a profession. His estimate agrees closely with that of Mr. Becton and Mr. Hall.

With the mechanical trades barred to the women, there are still fewer opportunities for them to become self-supporting, and as far as their chances in the matrimonial market are concerned they are practically nil. If the amount earned by the blind man is small, that earned by the blind woman is still less.

Is there any avenue by which the blind man or woman can earn a living honorably, not by semi-charity, but in competition with the seeing, rendering as efficient service and receiving a remuneration that will enable them to live comfortably and support not only themselves but their families? Yes, I believe so. It is my opinion that the blind can make massage their own particular profession. The blind possess some qualifications that eminently fit them to excel in this line of work. In the first place, they possess that peculiar delicacy of touch bestowed by a beneficent Nature to compensate in some degree the loss of vision. While, doubtless, this is the result of long training, and could be acquired by a seeing person, as a matter of fact a seeing person not having the necessity never does acquire the extremely sensitive fingers of the blind.

Another qualification that the blind possess is blindness itself. There is no other occupation that I can think of in which a blind person's infirmity is a positive advantage, but as a massage operator the fact that the patient can be treated without every bodily imperfection being noticed is a point not to be ignored. Most people object to expose their persons even to their own family physician, and more still object to do so before an entire stranger, as the massage operator, in all probability, would be. If, however, the operator were blind this objection would be largely obviated. The question of cost debars many worthy persons from taking advantage of the benefits of massage. Its enormous therapeutic value is now generally recognized by the profession

at large, but, unfortunately, two facts often prohibit its use; on the one hand the expense, and on the other hand, and this particularly true of the country districts, the difficulty of obtaining an operator. It is only the well-to-do that can afford to pay the fees demanded by the professional masseur. Take, for example, the case of a sick wife of a clerk or mechanic. Her sickness entails the services of a physician and the employment of some one to take care of the house. The physician decides that it is necessary for his patient's good that she shall receive massage regularly for some time, but on broaching the subject is told that it is absolutely impossible to pay a dollar or more a treatment. What with his fee and the extra expense of employing help to take the wife's place, there is not much left of the breadwinner's wages at the end of the week. But if a blind masseuse could be employed who would come and give the necessary treatment at a moderate charge this objection would have less force. On the other hand, if nothing is said and a high-priced masseuse is engaged, in all probability it is done at the physician's expense, for the masseuse, more worldly-wise than he, expects her fee to be paid at once, while the physician may wait indefinitely. In small towns and villages it is absolutely impossible to obtain a masseuse except at prohibitive rates from a larger city. This valuable therapeutic measure is therefore neglected, or the patient is obliged to leave home and visit some sanitarium, in which case the patient passes out of the hands of his family physician. Nearly every small town could provide sufficient employment for a blind masseur and masseuse, to the great benefit to the community at large, besides enabling the practitioner to keep his patient under his own eye, and the operators to earn an honorable living.

The field of labor is large and not yet adequately filled. Every hospital large and small could offer continuous employment to at least one operator. Every sanitarium could employ at least two, one of each sex, every insane hospital, private retreat, or home for the feeble-minded need masseurs, and Turkish baths can be counted among the institutions that require their services. Specialists in diseases of the nervous system keep many operators busy, and if the services of competent persons could be secured at moderate fees would keep many more busy. How much oftener would massage be prescribed if the physician felt that his patient could afford it, and how many of our nervous patients might recover more rapidly if it were possible for them to avail themselves of its beneficent action.

Another reason for the blind taking up this occupation is the great benefit it will be to the blind themselves. It is an acknowledged fact that physically the blind are not the equal of the seeing. This is mainly due to the lack of exercise and physical training. If as I propose massage is taken up as a course in the State institutions, as students they will require subjects to operate on, and where will they find patients more in need of their art than right at home? I should expect to see as a result of this a decided improvement in the general health of the pupils, manifested in an increase in the average weight, chest measurement, and grocery bill.

What is necessary for this proposition to be successful? The blind person who expects to take up massage for an occupation must be of sufficient physical strength. This I believe is largely under his own control. Muscular strength depends upon muscular use, and given a determination to succeed and build up a muscular system that has been enfeebled by lack of use, the average blind person can certainly undertake the duties of a masseur with a feeling of confidence.

No blind person who is infected with specific disease should become a massage operator. Even if the disease is no longer contagious—no one—not even a physician, would care to be operated on by a syphilitic if he knew it; there is a natural feeling of repugnance, and the success of this movement must not be hazarded by an accidental infection. If such an infection were to occur the news of it would travel as all ill news always does—apace. Therefore I would insist at the outset that specific infection should be an absolute bar to instruction, at least in any State institution.

The training must be *the best.* The pupils must be thoroughly grounded in the anatomy and physiology of the human body before the practical work of massage and Swedish movement is imparted. I should suggest a similar course to that given at the Baron Possé school. This institution turns out skilful operators, and if the blind are to succeed in this line of work nothing but the best is good enough. We have too many incompetents now. In this world to be successful one must offer as good an article as one's competitor, so if the blind would succeed they must offer service equal to that of the seeing, and not expect to be employed simply on account of their infirmity.

The habits of the operators must be above reproach. By reason of their infirmity the blind are apt to be untidy, as they cannot see if the clothing is clean or when their linen is soiled, but much can be accomplished by training. All disagreeable and unpleasant habits must be eradicated and a pleasing and cheerful manner cultivated. Success depends often as much upon little things as upon great ones, and an otherwise acceptable masseur will be handicapped if he neglects to keep himself and his wearing apparel scrupulously clean or has a disagreeable manner.

That this movement may be successful it is above all things necessary that it should meet with the co-operation of the medical profession, and this is my excuse for presenting this subject, though not a strictly medical one, before this association. Massage with all its attendant benefits is at present limited to the few who can afford to pay the somewhat high fees now demanded, but what is good for the banker or banker's wife is just as necessary for the bookkeeper and his wife, and if the profession can obtain as good and efficient service at a moderate cost it is certain that massage with all its tremendous therapeutic value will be employed more and more. There is no reason why a blind person should not become just as expert and efficient as a seeing one, and some reasons why they should be more acceptable. If in the course of the next few years blind massage operators apply to any member of this association for employment I trust that at least they may be given an opportunity to show whether or not they are capable.

## A SEVERE CASE OF SEPTICÆMIA LYMPHATICA.—RECOVERY.

BY ALEX. FORIN, M.D, ROSSLAND, B.C.

On the 5th day of April, 1897, I was called to a rather unusual case, unusual in that the patient was so completely infected that all sensation was benumbed, and I report the case for the purpose of argument, to show that, notwithstanding the symptoms seem almost hopeless, it is not well to consider the patient beyond help and do nothing.

When I saw the patient the temperature was 103 F., pulse 146. She was unconscious. Husband gave history as follows: Age 36. Mother of 5 children, miscarriage 10 days previously at 3 months. For several days the temperature had been high in the region of 104, and pulse frequent around 150. No decided chill, but cold, creepy sensations, bowels loose, sweating profuse, vaginal discharge limited, odor very offensive, bedding and patient in dirty condition, albumen in urine about 8%.

I advised and performed curettage within one hour after first seeing patient, assisted by Dr. Kenning. We found a large amount of debris in uterus, the result of broken down decidua, the odor of which was extremely offensive; used the sharp spoon curette, followed with intra-uterine douche of sterilized water, drying out cavity with absorbent gauze, swabbing with 95% carbolic solution, packing uterus with 10% iodoform gauze, and vagina with 5% of same. It was not necessary to use any anæsthetic, so far under the effects of the infection was the patient, not giving any indication by moan or movement that she felt the least pain; true the somewhat patulous os rendered the use of the dilator simple. Still, enough force was used to cause pain if the patient had been sensible to it. Five hours after operation I called, to still find her in an unconscious condition, but was able to arouse her slightly; pulse 130, temperature 101; again relapsed into unconsciousness or stupor, in which condition she remained till the following morning, when the temperature was 100 2-5, pulse 120; p.m. temp. 99 3-5, pulse 104. Removed vaginal tampon in evening and used vaginal douche hydrarg. bi-chloride 1-2500, again tamponed with iodoform gauze 5%.

7th. Pulse 98, temp. 99, patient stronger but wandering; removed intra-uterine packing in evening, and although I found everything very favorable, no odor being present, I used an intra-uterine douche of bi-chloride solution 1-2500, again packing uterus and vagina with iodoform gauze 5%.

8th. Pulse 130, temp. 101 3-5; ordered strychnia sulph. 1-60 gr. every hour till twitching of muscles presented; and although I strongly suspected the increased temperature and pulse present was caused by the toxic effects of iodoform, I did not remove the vaginal or uterine packings until the evening, when I douched with 2% creolin solution; upon removal of iodoform gauze the temperature dropped to normal and pulse to 98.

From this time on the patient continued to show improvement, sleeping and eating fairly well. Stimulants were used freely.

11th. Patient complained of pain in right side of face, temperature increased 1½ degrees and pulse quicker; gave calomel purge.

12th. I recognized a parotitis on right side. Dr. Osler reports some 50 cases of septic parotitis, and under that head I will have to place this. Although very painful for a few days, under the application of plumbi. acet. and Tr. opii. sol., it ended in resolution. From that time on the case has been uneventful. She is not moving around very lively on account of a burn on the sole of right foot, occasioned by applying too hot an iron the first day I saw her; although forewarned of the danger with the patient unconscious to pain, the attendant was remiss. Under iron and quinia tonic and proto-nuclein tablets she is quickly recovering.

This would not be complete without mention being made of the surroundings. In a new city like Rossland one cannot expect everything he would wish, and the houses or shacks are in some cases rather primitive. In this case the house was 10x12 ft.; one room, which was used as kitchen, dining-room and bed-room; the bed or bunk was what is known as a "double-decker," built in one corner of the room, with the kitchen stove in another corner. I was fortunate in having several ladies interested in the case, and they took turns nursing; the soiled and infected bed-clothes were changed after my first visit; the case was a desperate one when I first took charge and looked rather hopeless, but the result proved that it was not too far gone. True, I had no inflammation develop; but one thing sure, death would have occurred in a few hours had not radical means been used. Never give up while anything can be done.

---

Airol in Diarrhœa.—Venuti and Barbagallo (*British Medical Journal*) give the results of the administration of airol in 11 cases of diarrhœa. The dose given varied from 20 cg. to 90 cg. in the 24 hours. No ill-effects were noted, even when given for several days. Good results were speedily obtained in indigestion diarrhœas. Each case is briefly reported. On the whole the results were decidedly good.—*Maryland Med. Journal.*

---

Paralysis After Chloroform.—Tasse has recorded in the *Therapeutic Gazette* two cases personally observed by him, in which paralysis followed chloroform narcosis. He believes that such paralysis arises from several causes: 1st, from the position in which the patient is lying, whereby pressure is exercised upon a supplying nerve, or as a result of tractions on the arm or leg of a violent nature; 2nd, the employment of impure chloroform, which seems capable of poisoning the nervous system and producing such paralysis, at the same time developing transient or permanent albuminuria. He also believes that in some rare instances the chloroform renders the patient susceptible to microbic intoxication, with secondary paralysis from this cause.

## PROVINCIAL RECIPROCITY IN MEDICAL LICENSE.

While perhaps little general interest has as yet been aroused in Ontario on the subject of a registration and license covering the whole of Canada, the subject has aroused fairly widespread attention in most of the other provinces. It seems, at first sight, a great pity that the undoubtedly wise arrangement of the B.N.A. Act, by which educational matters were left in the hands of the provinces, should work such division in the ranks of the profession, for it is really too much of an anomaly that a man, for instance, who can practise in Hull, Que., should be fined if he consult with a brother practitioner in Ottawa. The last issue of the *Canadian Practitioner* contains a long and very useful gathering together of various public utterances of journals, councils, and medical societies, from which one can learn accurately the history of the attempt to secure uniformity since 1892. Among other statements of opinion from well-known men is the following from T. G. Roddick, made in his Presidential Address last August at the Montreal meeting of the British Medical Association :

"Time will not permit of my discussing the subject of medical legislation in Canada at any length; and besides, you will find it very fully treated in the excellent official guide or souvenir prepared for you by the executive committee. In addition I might explain, however, that when the British American provinces became confederated in 1867, under the British North America Act, the governance of educational matters was taken away from the federal authorities and handed over to the provinces, each to look after them in its own way. A Chinese wall is built round each province, and the frontier is carefully guarded so that it is unsafe for a medical man to pass from one to the other unarmed with a license, because of the risk of fine or even imprisonment. Such a condition of affairs is hardly credible and probably exists nowhere else to the same extent. What is the remedy? Two remedies have been suggested —either the establishment of a central examining board in each province with a uniform standard of matriculation and a uniformly high standard of curriculum, which shall in time lead up to a general scheme of reciprocity; or, secondly, a Dominion Examining Board. The first scheme is at present under serious consideration; although there are many difficulties in the way of its accomplishment, no one of them is insuperable, however, providing a spirit of conciliation prevails. The second alternative (a Dominion Examining Board) would in many respects be more desirable, because not only could the licentiate practise in any part of the Dominion, but he could register in Great Britain, and thus receive recognition all over the Empire. As you are doubtless aware, we, as a profession, suffer in this country from being inhabitants of provinces which are confederated. Under the Medical Act, now of some twelve years' standing, it has been decided, in effect, that the Medical Council of the United Kingdom can recognize the degrees of universities situated in autonomous provinces only. As a consequence, Australians obtain privileges which are denied to us, being permitted to register in Great Britain without

examination. We are being punished for belonging to a colony whose form of government is recognized to be in advance of theirs, and likely to be imitated by them. Let common school education go to the various provinces if you will, but for the profession of medicine (and doubtless law also) there should be a uniform standard of matriculation, a uniform curriculum of medical studies, and one Central Examining and Registering Board composed of the best men from all the universities. We hope in Canada to reach that ideal at no distant date; in fact, I have the very best authority for stating that it is not impossible of accomplishment. Some scheme of reciprocity first arranged would doubtless make the task less difficult, but failing that, our duty is to arrange for some legislation which shall give our better and more ambitious students an opportunity of passing a Dominion Licensing Board (or whatever it may be called), which shall give the privilege of practising their profession not only in any part of their native country, but in any part of the world over which the British flag flies. Such a scheme need not interfere in any way with the autonomy of the provinces. Each may still retain its Provincial Board for the purpose of examining and issuing licenses to those candidates who are satisfied to practise their profession in the limited sphere of their own provinces. I think the legislators of this country will some day (and not far distant either) be induced to see that the system which at present obtains is unworthy of a great and growing country."

The proposal to have a central Dominion Board for examining and registering "our better and more ambitious students" may need more consideration, but we confess that it seems to us attractive, though open to the objection that it would mean the multiplication still further of examinations, which are always an evil, and more particularly so when carried to the extreme which they have reached in Ontario, not in medicine only, but more particularly in the Public and High Schools and Universities. Of course, inasmuch as the greater includes the less, the probable outcome would be the natural death of the provincial examinations from lack of candidates, who by the one Dominion examination would secure all that the Provincial examination could give them, and a great deal more. At the late meeting of the Canadian Medical Association in Montreal the committee appointed last year brought in the following report, to which it will be noted the names of the Ontario representatives are not appended:—

"The committee beg leave to report that the Medical Councils of Quebec, Prince Edward Island, Nova Scotia, New Brunswick, and Manitoba have signified by resolution their approval of the resolutions of the committee of 1896, and have accepted them as the basis of agreement for inter-provincial registration We therefore recommend that the matter be referred to the councils mentioned to formulate an agreement, and to carry it into effect. Signed by Dr. D. Marsil, Dr. C. S. Parke, Dr. H. Cholette, Dr. Beausoliel, of Quebec; Dr. George Coultheard, jr., Thos. Walker, of New Brunswick; Dr. Ed. Farrell, Dr. W. S. Smith, of Nova Scotia; Dr. Joseph MacLeod, Dr. James Warburton, of Prince Edward Island; Dr. R S. Thornton, of Manitoba; Dr. James Christie, of British Columbia."

Dr. Walker moved the adoption of this report. Ontario did not appear as one of the assenting councils, and this was explained by doctors from that Province as due to the fact that they could not reciprocate while the Provincial law remains as it is. They would not consent to reduce the term of study from five years to meet the other Provinces. Ontario doctors disclaim any wish to be stumbling-blocks, but could see no use in adopting a scheme of inter-provincial registration.

Dr. Beausoliel championed the cause of Quebec and the other Provinces, and was supported by several gentlemen. They asked their Ontario colleagues to give and take, and pointed out that in Quebec the profession was endeavoring to harmonize the curriculum and standard with that of Ontario. Moreover, it was argued that a four-year course of eight months each was at least equal to a five-year course of six months each.

Dr. Pyne, Toronto, came out for Imperial federation of the medical profession, and declared that it would be impossible to obtain this or even reciprocity with the motherland if the standard of Ontario was lowered. It was an easier method for the other Provinces to come up than for Ontario to go down.

Dr. Thorburn, Toronto, spoke in a similar strain, while expressing sympathy with the other Provinces.

The report was adopted, many Ontario delegates voting aye.

This is a very imperfect report of the discussion which followed the presentation of the report. Among others who spoke were Drs. Dickson, Bray, Thornton, and H. P. Wright.

It will be remembered that a year ago the Councils of each Province were formally asked by the Canadian Medical Association to consider the question, and to have a definite and authoritative answer ready. The other Councils did so, and went to the trouble and expense of having accredited representatives at Montreal, but Ontario quietly ignored the matter at the midsummer meeting of Council, though reminded of it by the Secretary of the Canadian Association at the time. This action, it seems, laid them fairly open to the charge of discourtesy at the Montreal meeting. It would have been more polite to frankly state their position *pro* or *con*, and follow it up with reasons. It has been stated that this stolidity on the part of our Council may be met by a vigorous prod from the Legislature. Less likely things have happened in the past. The lay press in Montreal and Toronto have shown signs of taking it up. The Council should take warning in time, for if public opinion is once aroused they will have to give way with what grace they may.

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

## A REVIEW OF THE AUTHOR'S METHOD OF ANCHORING THE KIDNEY.

BY R. HARVEY REED, M.D., COLUMBUS, OHIO.

The frequency with which surgeons meet both floating and movable kidney has long since attracted attention as to the best method of anchoring this organ so as to preserve its normal functions. The multitude of complex disturbances and reflex symptoms associated with a floating or movable kidney, are such that the surgeon is constantly called upon to render relief. These abnormal conditions may last for years without serious results, yet they are liable to give rise to degenerative changes which may necessitate a nephrectomy or a nephrotomy at any moment. Palliative treatment, by means of rest and bandaging, as a rule, avails but little. The difficulty of holding a kidney in place with a bandage is such that little reliance can be placed on this method of treatment.

From the fact that this abnormal condition is chiefly a source of annoyance rather than danger, patients hesitate in submitting to an operation for the purpose of anchoring the kidney, as it seems to them like a very large undertaking for the purpose of accomplishing very small results. It is hard to make them understand the importance of having the kidney anchored and the danger that is likely to arise from neglect of the proper surgical treatment. At the same time we can hardly blame them or their family physician for not urging an operation which requires a large oblique gash through the lumbar muscles and a number of buried sutures which are difficult to insert. Only those who have attempted to perform this operation can appreciate how hard it is to hold the kidney in place by the old-fashioned method until it is sutured to the deep muscles of the back. The difficulty of this procedure stimulated me to devise a new operation which had for its object, simplicity, rapidity and efficiency.

Referring to a paper read before the Columbus Academy of Medicine, November 19, 1894, on "A New Method of Anchoring the Kidney,"

published in the *Columbus Medical Journal*, December 25, 1894, you will find that my operation consists "in making the ordinary perpendicular abdominal incision over the median line of the kidney. As a rule it need not exceed two and a half inches in length, depending largely on the thickness of the abdominal walls. Having made the incision sufficiently large to get the fingers in and bring the kidney to its normal place, I then use a long needle which I have had made on purpose, seven inches in length. Two of these needles are threaded with aseptic silkworm gut or aseptic silk, using but one ligature. Having placed the kidney in its normal position (and in the case of a floating kidney scored the peritoneum so as to favor adhesions), I now insert my first needle through the upper and inner part of the cortical substance of the kidney directly through the muscles of the back, bringing it out between the eleventh and twelfth ribs. The second needle, which is on the other end of the ligature, is also passed through in a similar manner, about an inch from its fellow, through the upper and outer cortical substances of the kidney, making, as you will recognize, a staple stitch. These ligatures are tied on the integument of the patient's back by an assistant. If necessary another suture is inserted in a similar manner through the outer margin of the kidney, the first needle of the second suture being passed about an inch below the last needle of the first suture, and the second needle of the second suture about an inch below the first needle of the second suture through the cortical substance of the outer portion of the kidney."

You will readily see that this is a very simple operation, does not involve any vital structures, and can be performed in a few moments with little or no danger to the patient, while the results have been even more than anticipated. In explaining the method I had adopted, to my friends, I found but, practically, one criticism, and that was a lack of confidence in obtaining satisfactory results. Recognizing the fact that it required several sutures, by the old method, to hold the kidney in place, they did not see how it was possible for one or two sutures to accomplish the same. If you stop to study the difference between the two methods, you will readily observe that the new method "clinches," so to speak, the kidney by a staple suture, while the old method simply sutured the posterior portion to the deep lumbar muscles. The merest tyro will readily see the mechanical difference between the two sutures. The one not only embraces the entire kidney, but pierces the lumbar muscles and is re-enforced by the integument on the back, while the other simply involves a portion of the friable cortex of the kidney and a small portion of the tenderloin; hence it is quite evident that more sutures would be required by the old method than the new.

Since devising this plan for anchoring the kidney, I have had an opportunity for demonstrating its practical utility in five cases operated by myself and one by my colleague, Dr. Means, with the most satisfactory results in each case. The rapidity with which the operations were done is one of the marked features. It is only necessary to make a very small opening into the abdominal cavity, bring the kidney to its normal position, pierce it with the needles, as above described, tie the sutures over a piece of iodoform gauze on the back, and close the abdominal

wound. There are seldom any constitutional symptoms following the operation. The patient has little or no pain or rise of temperature, while the pulse remains practically normal. In about ten days the suture can be removed, leaving the kidney entirely free from any foreign substance. I usually have the patient remain quiet from two to three weeks after the operation.

Up to date there has not been a single instance of a return of the disease; so far as I have any knowledge, the patients are all enjoying good health, and are entirely free from the reflex symptoms which were so annoying prior to the operation. In two of these cases it was my fortune to have an opportunity to examine the result; in one case several months afterwards and the other nearly two years. In each case the patient had to be operated for ovarian trouble, and in each I made a careful examination of the kidney which had been anchored, and found it firmly fixed, and, so far as I was able to judge, in a perfectly healthy condition.

I do not claim that the few cases which I have reported are sufficient to establish the fact that this method is without fault, but I do claim that up to date the results secured are better than those usually obtained by other methods.

150 East Broad St.

## TREATMENT OF STRICTURE OF THE RECTUM.

Berger referred to the communication made by Réclus upon this subject at the previous meeting, and expressed the opinion that progressive dilatation brings about very satisfactory results, provided certain rules are observed. The dilatation should be made slowly and carefully, and there should always be an interval of from twenty-four to forty-eight hours between the sittings. The insertion of a larger dilator should not be attempted at each *séance*, and it should be borne in mind that the axis of the pathologically-modified rectum is not the same as that of the normal rectum. Simple dilatation is not sufficient to cause the disappearance of the symptoms of stenosis; the rectitis must also be combated. The latter feature of the disorder is best treated by lavage. Dilatation does not always succeed; the conditions which cause its failure may, however, be previously determined and regarded as counter-indicative of this mode of treatment. Berger considers that dilatation is contra-indicated when (1) the stricture is located very high up; (2) when there is great abundance of suppuration, intensity of pain, and tenesmus; (3) when great weakness has induced a precarious condition of the patient: (4) when violent reaction, sometimes occurring after a sitting during which dilatation has been performed—*i.e.*, chills with collapse, symptoms denoting an infectious condition—is present. For the cases in which dilatation is not available Berger prefers linear rectotomy to extirpation.

Quénu cited an example which clearly demonstrated that specific treatment is of no use in stricture of syphilitic origin. In the case in question Quénu witnessed the formation of a syphilitic ulcer of the anus followed by stricture of the rectum. Very energetic antisyphilitic treatment

failed, and it was necessary to resort to excision of the stricture. Notwithstanding this measure, the rectitis remained so intense that it was decided to make an artificial anus. Generally speaking, Quénu believes that none of the treatments result in a cure, but merely produce amelioration. He considers that the extent of the stricture should serve as a guide in indicating extirpation.

Schwartz cited a case in which posterior rectotomy, followed by dilatation, produced an excellent result, which was maintained during twelve years.

Réclus stated that in reporting his two cases he wished to call attention to the facility with which dilatation can be practised when the mucous membrane is previously anæsthetized by the aid of a tampon saturated with a cocaine solution. He was able to proceed more rapidly. It is not necessary to leave an interval between the *séances* when this local anæsthetic is employed.

## THE NERVOUS AND MENTAL PHENOMENA FOLLOWING SURGICAL OPERATIONS.

BY HAROLD N. MOYER, M.D., CHICAGO.

It is needless to refer to the great advances of modern surgery. It has often formed the theme of addresses before medical societies, and furnishes a fit introduction to many surgical papers. With the advent of anesthetics fifty years ago there was a great impetus given to operative work, which twenty years later was accelerated by the discoveries in the domain of surgical fever and wound infection. To these great achievements must be added a third, namely, the control of hemorrhage, which plays such an important part in modern surgery. It may be said that surgery in our day has reached the position of an exact science in relation to pain, hemorrhage and infection. Could the same be said of shock the surgeon would be well-nigh omnipotent in the operative field.

Our knowlege of shock is about the same as it was fifty years ago. Undoubtedly, shock was much greater before the days of anesthetics, but it is to be remembered that surgical operations have lengthened and operative technique has become greatly extended since the discovery of anesthesia. Indeed, it may be safely asserted that surgery, as to-day understood, would have no existence but for the boon of artificial anesthesia. The same is true, to a lesser degree, of antisepsis and hemostasis.

It seems to the writer that too little attention is paid to the nervous states which predispose to shock. Of late years studies of the heart and kidneys have been made, but the nervous system does not seem to have been included in that careful scrutiny which should precede every surgical operation; at least the literature on the subject is exceedingly meagre. It has been known for years that patients sometimes die very suddenly during the most trivial operations, such as a hypodermic injection, or a slight incision, or the extraction of a tooth; but only during the past year have a series of these cases been investigated. In all of them an enlarged condition of the thymus gland was found, to which condition

the term "constitutio-lymphatica" has been given. We know of no means of recognizing this condition during life. Perhaps, if cases were studied in reference to this state, clinical data might be accumulated by which it could be recognized, and thus some of the most deplorable accidents in surgical practice might be averted.

It would also seem advisable to study the general nervous system, especially with reference to the pupils, muscular tonus as shown by the tendon-jerks, the superficial reflexes, co-ordination, etc. We are not aware that systematic studies of this kind have been made. It would seem that in this way valuable data could be obtained relative to the conditions which pre-dispose to shock.

It is now generally believed that the length of an operation, the quantity of anesthetic, the part involved, the amount of hemorrhage, are the chief causes which determine the degree of shock. This is only a partial statement, as the nervous condition of the patient is frequently a determining factor of vastly greater importance. Ever since the beginning of surgery it has been observed that some patients bear operations well and others do not, relative to the amount of shock sustained. Up to the present we know of no systematic studies looking to an explanation of this fact. We believe that if such studies were made valuable data would be obtained for the treatment of patients before operation. Even with our present imperfect knowledge it would seem as if much might be done to lessen the collapse which accompanies or follows operation.

While it is conceded that shock is largely physical, yet the mental condition of the patient plays a most important rôle. A confident feeling on the part of the patient in the operator and the result of the operation is one of the most important factors in lessening shock and preventing the unpleasant nervous sequelæ which follow. We think that too little attention is paid to this important point. The value of suggestion here will be at once apparent. An effort should be made to hypnotize patients before operation, and to precede the anesthetic by full hypnosis. Insome cases it prove unnecessary to employ an anesthetic at all; we believe that much may can be done by the use of drugs. The use of a few large doses of bromides before an operation will tranquilize the nervous system and lessen apprehension. Alcoholics and opiates may be employed for the same purpose. We believe that all of these agents are too much neglected in the preparation of the patient. In addressing a body of surgeons it is hardly necessary to emphasize the importance of reducing the length of operation to a minimum. We are of the opinion that in many cases the anesthetic is given carelessly, and in others the time of anesthesia is prolonged owing to a want of preparation. Again, care is often not exercised to reduce the amount of an anesthetic used to a minimum. To do this requires the services of an experienced anesthetist, while too often this important duty is left in the hands of the junior assistant, who begins his medical experience in this way. Another subject which is not referred to in our statistics of anesthesia is the question of nervous shock and sequelæ in relation to the particular anesthetic employed. We have had a prolonged controversy as to the mechanism of death by chloroform and ether, but I know of no data bearing on the relative influence of these agents in producing shock.

The question of local anesthesia by the Schleich method is one that is bound to be of great importance in lessening general anesthesia and consequently shock. We do not yet know how much this can be employed in connection with general anesthesia, thus lessening the duration of the latter and the amount of drug required.

I cannot pass this topic without reference to the importance of maintaining body heat during an operation and in the early post-operative period.

The nervous phenomena which follow operation often have their foundation in the pre-operative period, and no intelligent discussion of their treatment can be had which does not include the entire care of a patient before and after operation. It is to be remembered that every operation is followed by a certain amount of shock; this may be of longer or shorter duration, and should be treated in each case. After every operation the patient should be surrounded by warm bottles, and the foot of the bed elevated. I will not go into the description of treatment of severe shock, but will confine my remarks to the neurasthenic state which succeeds the shock and which may last for from a day or two to a lifelong condition. In the presentation of this and other nervous sequelæ the most important thing is to secure sleep. If pain follows an operation it should be relieved if possible. If the patient is nervous and shaky a sedative should be given. We believe that the bromides are too infrequently used for this purpose. The common impression regarding them is that they interfere with nutrition and are very depressing. This is true of their prolonged use, but their employment for a few days is not attended with such objection. They have the property of putting the nervous system in splints, and for this purpose are invaluable, and are too much neglected by surgeons in the post-operative treatment. They should be administered in large doses to be efficient, from thirty to eighty grains well diluted. With bromides a good general tonic may be administered. Particular attention should be paid to the condition of the bowels, and above all to the amount of fluid taken in; in some cases this is excessive, but in many it is diminished, and we are confident that many cases if watched will be found to take very little fluids. For these water must be prescribed in definite quantities. Of course the early administration of liquid food goes without mentioning. The plan which ought to be adopted is to lessen so far as possible the shock of operation, and to treat the neurasthenic state which is the outgrowth of this condition. The treatment of the neurasthenia should begin immediately after operation. In this way the best results will be secured and the patients will not pass into the category of chronic invalids.

We have spoken of neurasthenia as being to some degree present after all operations; in some cases hysteria may develop, but this is more rare and usually occurs in those who have had the disorder.

Mental disorders are by no means uncommon—the mild or severe delirium which comes on soon after operation, and which may lead to a fatal termination in a few days. This has been and is well described by the term "delirium traumaticum." Its treatment is not different from that of acute mania, though the surgical aspects may materially complicate the treatment.

The forms of insanity following operations are almost always included under the terms confusional, which is the most frequent; melancholia, less frequent; hypochondriasis, simple mania, and sometimes paranoia. As a rule the chronic degenerative psychoses do not have their initiation in a surgical operation. The treatment of these various conditions is not different when caused in this way from what it is when occurring in non-surgical cases.

I cannot leave this part of the subject without calling attention to the very great importance of differentiating the psychoses from the mental changes which follow the acute inflammations of the kidneys and the consequent lessened secretion by these organs.

In conclusion, allow me again to call your attention to the very great importance of the nervous system in surgical work, that a due appreciation of it is an important factor in preventing mortality and in realizing that full benefit of operative work—a restoration of health.—*Medicine.*

## SURGICAL HINTS.

Look out for your assistants, and hold them equally responsible with yourself for any mishap. A furuncle of minute size on the hand of any assistant may cause the failure of an otherwise perfect piece of surgical work.

It is a mistake to constipate the patient for more than forty-eight hours after the operation for hemorrhoids by clamp and cautery. When the bowels do move by oil or soap-suds enema, see that some one is with the patient to act in case of syncope.

High temperature is not a necessary feature of appendicitis. A case may run the whole gamut of perforation, abscess, peritonitis and death while the thermometer never exceeds ninety-nine degrees Fahrenheit. The pulse is a much safer guide.

Cotton and linen thread boiled for a few moments in five per cent carbolic watery solution makes a useful suture or ligature material in an emergency. It is, of course, not so strong as silk or catgut, but is quite non-irritating, and may safely be left in a wound as a buried ligature or suture.

The operation of tracheotomy is rendered much easier by allowing the patient's shoulders to rest upon a thin pillow with no pillow for the head. The tissues at the front of the neck are thus put upon the stretch, and one has plenty of room for the work. Let your skin incision be a long one.

When a mass of tissue has been removed from the soft parts in an aseptic operation, it is well, by means of sutures, to obliterate as much as possible of the vacant space, bringing its walls everywhere into contact. If this is not done, the defect fills with clot, which forms a tempting feast for the germs of putrefaction.

Leave a fillet of silk in each edge of the tracheal wound to be used in case the inner tube becomes dislodged. Should this accident occur, or

should suffocative symptoms arise when the tube is purposely removed, a slight traction upon the silk fillets will open the trachea widely, at once relieving the patient and rendering the reinsertion of the tube easy.

When a lymph gland abscess which has been incised shows indolence in healing, the cavity should be frequently curetted and disinfected. When the signs of neighboring gland involvement appear, a free and extensive dissection should be undertaken for the removal of all suspicious tissue, whether cicatricial or glandular. A delay of a few days may be permitted where syphilitic disease is suspected in order to try the effect of appropriate general medication.

Catgut may be rendered aseptic and even antiseptic without complicated apparatus by the following simple method: Wind the gut on reels. Shake the full reels in a jar of ether to remove the fat. Soak them in ten per cent. carbolic made with alcohol for from six to twenty-four hours, according to the thickness of the gut. Now place the reels in pure alcohol and the catgut is ready for use, and will be found to have lost little or none of its tensile strength.

In operating for hemorrhoids by clamp and cautery, be sure you clamp the tissue in radiating folds, so that the eschars shall be to the anal center as the spokes of a wheel to the hub. Subsequent stricture is thus avoided. Do not include too much tissue, for the cautery often burns deeper than one might expect. Only the pile-bearing mucous membrane should be burned; if it is desired to remove the external or skin piles, it may be done by ligation, previously incising through the skin to avoid the pain of the constricting ligature.

In estimating the character of a new growth, one should never depend wholly upon the microscope. Clinical observation is far more important, although in case of doubt the histology, as revealed under the lens, may turn the scale. In the present stage of medical science it would be poor surgery to condemn a limb or an organ, or to perform an operation which would imperil life, on the uncorroborated evidence of the microscope, while a tumor histologically benign, though clinically malignant in its course, should be extirpated as thoroughly as if the pathologist's report had been unfavorable.

In using retractors during a dissection, be careful to raise up the tissues, not merely separating the lips of the wound, but lifting the skin or fascia away from the deeper structures. In this way the blood vessels are not emptied and rendered invisible, but may be clearly seen, allowing the operator to secure them before dividing them. The different fascial and muscular layers are also separated from each other, so that they may be divided one at a time. By the faulty method of mere lateral traction the layers rest one upon the other, forming apparently a single membrane, while very considerable vessels being emptied of their blood become invisible, and may give one a most disagreeable surprise when, after a stroke of the knife through an apparently innocent bit of fascia, the tension is released and a sudden gush of blood fills the wound.

# MEDICINE.

IN CHARGE OF

N. A. POWELL, M.D.,

Professor of Medical Jurisprudence and Lecturer on Clinical Surgery, Trinity Medical College; Surgeon to the Hospital for Sick Children, and to the Extern Department Toronto General Hospital; Professor of Surgery, Ontario Medical College for Women. 167 College St.; and

WILLIAM BRITTON, M.D., 17 Isabella Street.

## HEMORRHAGIC PLEURISY: A STUDY OF THIRTY CASES.

The present paper is based on an analysis of thirty cases, twenty-seven men and three women, taken from the records of the Boston City Hospital, in whom a pleural effusion, sooner or later in its course, assumed a hemorrhagic character. With one possible exception, a patient in the last stages of phthisis associated with hepatic cirrhosis, where a distinction was impossible, the effusion was the result of a pleural inflammation and not a local manifestation of a general dropsy. In thirteen cases it was present in the left side, and in eleven in the right alone, while in six both were involved, in two of the latter bloody fluid being found in each chest. In two others one pleura contained blood and the other clear serum. In the remaining two cases the character of the exudate was determined only in one side, the amount in the other not being sufficiently large to require aspiration. It is perhaps questionable whether five cases, in which the first and one in which the second tapping also was macroscopically clear, while the second or third was bloody, should have been included in this number, from the possibility that the hemorrhage may have been due either to accidental injury by the needle or to rupture of the newly-formed vessels on the surface of the pleura during the expansion of the lung. The former is a comparatively rare event which would probably show itself by the appearance of blood in the latter portion of the fluid withdrawn at the time, while the fact that the rank and file of cases undergo repeated aspirations and yet remain serous throughout would indicate, that, if the escape of blood occurred during expansion, the same changes had taken place, either locally, or in the blood or in the vessels, as in cases which are hemorrhagic from the start, but that some outside influence had been required before such changes became evident. It is possible, also, from the considerable distance between the several sites of puncture that some of the cases were examples of a loculated pleurisy, one cavity containing blood and the other clear serum, while others were instances at the outset of Dieulafoy's microscopically hemorrhagic cases, the presence of large numbers of normal and abnormal red globules being demonstrated in the first exudate, although not in sufficient quantity to give a distinct red tinge.

The question whether some of the cases ought not also to be included, in which the first portion of the fluid ran clear while the later became

bloody, need not be discussed in this connection, since only three instances happened to be found, in one of which a large vessel was evidently wounded, while of another, the record states that he turned during the operation and probably scratched himself, and of the third that the hemorrhage resulted from scraping of the canula upon the visceral layer of the pleura.

Special interest attaches to the etiology of these cases from the very generally received opinion that tuberculosis and cancer are the most frequent causes, but unfortunately it is impossible to definitely determine it in every instance, partly from the inherent difficulty of the subject and partly because bacteriological examinations were so rarely made; yet an analysis of them show conclusively that a hemorrhagic effusion may occur as a symptom in pleurisies of very different origins. Tuberculosis, nevertheless, heads the list as the most frequent etiological factor, though not present in a majority of the cases, eight being classified as due to an uncomplicated tubercular process. Yet the diagnosis was proved only in one case, which came to autopsy, in the others it rested either on the associations of characteristic pulmonary or other lesions, or on the course of the disease in spite of repeated failures to find the bacillus either in the sputum or the exudate. Three other cases were associated with phthisis, but as one of them was complicated by hepatic cirrhosis (fatal) one with chronic nephritis, and one with sarcoma of the ribs, while streptococci were found in the effusion, it is difficult to estimate which of several factors may have been operative, since there is no reason why a patient with a phthisis should not suffer from a pleurisy due to some other cause than the tubercle bacillus, though this possibly seems to be frequently overlooked. It is interesting to compare this series with a somewhat smaller number of serous pleurisies recently reported by Eichorst, in which fifteen out of twenty-three were proved to be tubercular by inoculation experiments; but no inferences can be drawn, since it is possible that in the former the tubercle bacillus may have played an active part in some of the cases which have been classified under other heads. The fact, however, that but one case out of four, which came to autopsy, showed any evidence of tuberculosis is interesting in this connection.

A number were undoubtedly due to infection with the pneumococcus, although positive proof was furnished by its discovery in the effusion in but two, one of which occurred in the course of a chronic nephritis; the other was secondary to pneumonia and eventuated in empyema. It was also demonstrated in the sputum of another in which both acute rheumatism and pneumonia were present, but was not found in the exudate, which was sterile. Two others either accompanied or followed an acute lobar pneumonia, in one of which Friedländer's capsule was found in the expectoration, and probably also the pneumococcus, although owing to the peculiar wording of the record it cannot be definitely stated. The effusion was sterile. In two more the cause of death was proved by autopsy to be a general infection with the latter organism, but no mention is made of cultures being taken from the pleural fluid. One had been admitted for puerperal eclampsia, the other for measles. The latter was the only case in which any of the exanthemata was concerned, and here it probably

played only a subordinate part, if any, in determining the character of the effusion, as the pneumonic process, to which the pleurisy was secondary, developed late in the course of the disease.

It is an accepted fact that pleurisy is a common complication of acute rheumatism and chronic nephritis, and in the present series this association, in addition to the cases already mentioned in connection with tuberculosis and pneumonia, was represented by three instances of each. The rheumatic cases all ran a very severe course, as all three developed a pericarditis, while in two the endocardium was also involved. In one of the latter infection with the colon bacillus was proved by its discovery in the exudate.

Four may be grouped together as instances of simple pleurisy, in one of which a culture showed a growth of pure staphylococcus aureus. All of them developed in previously healthy individuals, ran an acute course and ended in apparent recovery, more or less fibrinous deposit, however, still remaining at the base of the chest at the time of discharge.

The results of the bacteriological examination of the eleven cases in which it was made are summarized as follows: six were sterile, one contained streptococci and eventuated in empyema, one staphylococci aurei and one the bacterium coli commune. Two contained pneumococci, but for reasons which have already been given this number probably does not fully represent their activity. In a twelfth case miliary tubercles were found at the autopsy.

That but one case associated with malignant disease is found in this series, and in this it is doubtful if it possessed any etiological significance, is perhaps explained by the fact that they were largely taken from the general index of the hospital and not from a search through the records, so that it is possible that a pleurisy occurring as a complication may not have been so indexed in the latter that it could find its way into the general catalogue. This may also account for the appearance of but one case in which any of the exanthemata were involved.

The evident reason for the bloody character of the fluid furnished by the pathological state of the pleura at the autopsy of some of the cases which are due to tuberculosis and cancer may account for the grave significance so generally attributed to this symptom, but the favorable course of the effusion in many cases of the former class would indicate that in a portion of them at least local lesion is histologically rather than grossly tubercular, and similar to what usually occurs in simple serous effusions arising from this cause, and occurring either with or without marked phthisical changes in the lungs, and that the blood was the result of a general condition which might exert the same determining influence in cases of hemorrhagic pleurisy of tubercular origin as in those which are not. This might be a personal idiosyncrasy, although there was no reason to suspect a hemorrhagic tendency in any of these cases, or the effect of a grave constitutional disturbance, which by leading to changes in the blood-vessels or in the blood would allow the easier escape of the latter through rupture or diapedesis. Among the causes which might induce the latter, overwork, exposure, and the neglect of every hygienic and sanitary law are so common in hospital patients that no special stress

can be laid upon them, and the same is true, though in much less degree, of over-indulgence in alcohol, which was frankly admitted by nine, while nine others confessed to its use in moderation, a term which, under the circumstances, admits considerable latitude of definition. Age may have been a factor in some instances, since nine were over forty-one (seven being over forty-six), a period when vascular changes may be expected, especially among persons whose manner of life would accentuate any tendency thereto. Fifteen cases occurred during the course of diseases accompanied by serious changes in the blood, in the blood-vessels or in both, five, or six if the case of puerperal eclampsia is included, in which fatty degeneration of the liver and kidneys was found at the autopsy, being associated with nephritis, four with acute rheumatism, two with chronic valvular disease of the heart and one with hepatic cirrhosis. The two remaining cases were suffering from active syphilis, in one of which it was the cause of death, the autopsy showing syphilitic myocarditis with an unusual distension of the cardiac walls and the presence of pulmonary infractions. There was an effusion in both pleural cavities, but it was bloody only in the left, which was actively inflamed. Several of these factors were frequently combined in the same individual, but there were twenty-three in whom one or more of them were present.

In order to determine the final result in those patients who left the hospital with the issue still in doubt, an effort was made to trace them to their homes, but as, from their nomadic habits, it met with success in but four instances, the prognosis in about half the cases must be based on their course while under observation, their condition at the time of discharge and the probable etiology, a certain margin of error being admitted. Eight patients died in the hospital, while seven others were discharged in a practically hopeless condition, one of whom has since died and another is in the last stages of consumption, making exactly fifty per cent. of the whole number. Ten left the hospital practically well after an average stay of 46 days, that is, apart from a sense of debility incidental to a confinement of several weeks, they felt in their normal condition of health, and the signs in the chest had either disappeared or were those of a fibrinous deposit at the base of the pleura. Five cases must be left out of account as they remained under observation too short a time.

These results show the course of the serious constitutional diseases so frequently associated with pleurisies of a hemorrhagic character rather than the progress of the pleurisy itself, which may have entirely healed long before the fatal result and have contributed to it only indirectly, if at all, by weakening the resisting power of the patient. In sixteen cases one or two aspirations were sufficient to arrest the accumulation of the fluid, and this happened in one case where the autopsy showed the presence of gross tubercular lesions, the visceral and costal pleura being much thickened and studded with grayish-white specks the size of a millet seed. Only a small amount of fluid remained in a coarse mesh-work of fibrous tissue at the base of the lung. In eight cases no conclusions can be drawn, as five died and three were discharged almost immediately after aspiration. Two eventuated in empyema, which, in one following pneumonia, was foreshadowed by the cloudy character of the fluid ob-

tained at the first puncture. In contrast to the latter there were two in which the effusion at the second aspiration proved to be clear serum. In two thoracentesis was not considered necessary, the character of the fluid being shown at the autopsy. In two instances, both of which were undoubtedly tubercular and ran a rapidly fatal course after admission, the chest immediately refilled after each tapping, which was performed three times, the amounts withdrawn varying from one to six pints. The behavior of the exudate in the two last cases brings up the only point in treatment which seems worthy of mention, as it suggests the impropriety of too frequently repeated punctures or the withdrawal of too large amounts of fluid, since, if reaccumulation is rapid, aspiration is practically a venesection and more harm may result from the loss of blood than from the presence of the fluid. In a few instances, where a large amount was removed, the discomfort of the patient seemed to be increased and the tendeney to refill made greater by allowing the highly inflamed surfaces of the pleura to rub against each other.

The number of cases under consideration is too small to allow conclusions drawn from their analysis to be embodied in statistical form, but the following propositions seem justified:

(1) Hemorrhagic pleurisy may occur either as a primary affection or as a complication occurring in the course of other diseases.

(2) That as in other forms of pleurisy tuberculosis is the etiological factor in a very considerable number of cases, yet the proportion due to other causes is so large that the mere fact of its hemorrhagic character does not justify a diagnosis of tuberculosis, even in the absence of cancer, without corroborating evidence.

(3) That among other causes the pneumococcus takes a prominent rank, but other micro-organisms occasionally are found as the infecting agent.

(4) That in a large proportion of the cases conditions are present which lead to an easy escape of blood from the vessels by producing changes either in the blood, in the vessels, or in both. Among them may be mentioned advanced age, alcoholism, and the presence of severe constitutional diseases, of which nephritis and rheumatism are the most prominent.

(5) That, as in cases of simple serous effusion, the prognosis must be individualized and based on the underlying causes and the general condition of the patient, but that taken as a whole, from the frequent association of other diseases, the prognosis is graver than in simple pleurisies, yet a very considerable number completely recover.

(6) That except when it appears as a complication in the later stages of some other disease a hemorrhagic effusion may be expected to run a favorable course, as in a majority of the cases the chest does not refill after aspiration, which may, however, have to be repeated once or twice.

(7) That, as in simple serous pleurisies, a certain proportion of cases will eventuate in empyema, but that there seems to be no special tendency toward this result.

(8) That in the occasional cases where the chest rapidly refills, aspiration should not be repeated too frequently, lest more harm result to the patient from the loss of blood than from the presence of the fluid.—Dr. G. G. Sears, *Boston Med. and Surg. Jour.*

## SOME OF THE UNTOWARD EFFECTS PRODUCED BY THE ADMINISTRATION OF THE BROMINE COMPOUNDS.

BY H. A. HARE, M.D.,

Professor of Therapeutics in the Jefferson Medical College of Philadelphia.

It is not my intention to discuss in this paper the well known untoward effects of the bromides as they are manifested by eruptions on the skin, mental torpor, and the final development of a cachexia and general as well as nervous feebleness. The conditions on which I desire to dwell are more unusual and not so well known to the profession, although they are more common than would be supposed.

In the study of remedies, both old and new, the tendency of the physician is rather to record his successes than his failures, and to report the instances in which the drug has done good rather than those in which it has failed or done harm. It is only after many years of experience roll by that the profession gains a complete view of the reverse of the therapeutic shield.

The untoward or unexpected effects of drugs are, however, never to be forgotten, and the possibility of a remedy causing an unusual symptom is to be ever borne in mind.

At a meeting of the Association of American Physicians held in Washington in May, 1896, Weir Mitchell read a paper detailing a number of instances in which the use of the bromides had speedily produced a number of untoward effects over and above the skin eruption, disordered digestion and mental slowness usually met with after full doses of this drug are used. Thus the symptoms manifested consisted in great irritability of temper, moroseness, and homicidal or suicidal tendencies. In one case, that of Jacksonian epilepsy in a child, imbecility developed from the use of bromides; another child became a sufferer from amnesic aphasia; and in an adult female suicidal tendencies and melancholia appeared when the drug was used and disappeared when it was stopped. Voisin and Stark reported cases many years ago, and Harriet Alexander as recently as July, 1896, has contributed a valuable paper on this topic, in which she reviews the literature on this subject in this country quite thoroughly. Seguin reported the case of a twelve-year-old boy who had *petit mal* in the form of chills, and when these were stopped by the bromides he became unmanageable and boisterous. Hughes of St. Louis has reported another case of *petit mal* which developed kleptomania when the bromides were given, and Rockwell has recorded an instance in which an epileptic female on taking the bromides became irritable and suspicious. Dr. Alexander in the paper quoted cites several instances from an earlier contribution of hers on this subject. An epileptic nymphomaniac always became irritable and suspicious on the use of the bromides. In another woman, with a family history of epilepsy and imperative homicidal conceptions of long continued form, erotico-religious, auditory and visual hallucinations followed the use of the bromides. In another female troubled by coprolalia the bromides caused sullenness and

unrestrained coprolalia. In still another case the bromides caused an irritable suspicious state in which the patient became treacherous. A ten-year-old girl with procursive epilepsy had three attacks replaced by irregular kleptomania attacks, and she became suspicious and irritable. The last three cases reported by Alexander are particularly interesting. They are as follows:

A female has *petit mal*. She denies all epilepsy. Long after her marriage, epilepsy, although it clearly existed, was never suspected until she awoke her husband one night by beating his face with a slipper while unconscious. In the inter-epileptic period she is mild-tempered, good-humored, and suave. Under the bromides she becomes first irritable, and querulous during the inter-epileptic period, then paroxysmally and furiously excited, and has vivid auditory and visual erotico-religious hallucinations and is coprolaliac. Mixed treatment has no such effects.

Since then Alexander has observed the following cases:

A thirty-four-year-old woman had *grand mal* followed by a dazed condition. under the bromides these attacks were replaced by nymphomania with decided erotic manifestations, attended by religious hallucinations and furious masturbation. The use of ergot removed these manifestations, and the alternation of ergot with the bromides prevented them.

A forty-two-year-old woman had attacks of *grand mal* at the menstrual period and *petit mal* in the interregnum. These were both replaced by furor under the bromides.

Similar instances have been reported by Janeway, Dana and Draper: and the older literature of medicine shows that these unusual effects were not unknown and are not now met with for the first time. Many years ago Hammond recorded the case of a gentleman to whom he gave at first fifteen grains of potassium bromide three times a day. These doses, which were slightly increased, soon produced symptoms of mental aberration, which disappeared when the medicine was stopped. Later the patient of his own free will insisted upon taking as much as one ounce of the drug a day. He developed marked insanity, delusions of persecution, and the delirium of grandeur. He became timid and cowardly, and finally so insane as to necessitate his removal to an asylum, in which recovery took place. In other cases hallucinations as to sight or sound have come on without there being any alcoholic history to complicate the case.

Bannister has also reported a condition of pleasurable intoxication with exaltation of mind after doses of bromide. Thus he reports the case of a man of thirty-six years of age who was a sufferer from frequent epileptic attacks and had slight mental impairment, but no true psychic disorder and no delusions. He was regarded as a quiet, well-behaved patient, except when the bromides were given him, when he became furiously excited and unsafe. Thus before commitment to an asylum he had been convicted of homicidal tendencies. Small doses of the bromides rarely brought on the attacks except after several days, but as much as one and a half drachms daily made him unmanageable in three or four days. Stopping the bromides stopped the mania, but allowed the return of the attacks. Bannister reports other cases, three in all out of twenty-one epileptics under his care. This and the following report of cases

illustrated the clinical fact that the arrest of epileptic attacks by full doses of the bromides produces on rare occasions evidences of nervous excitation in other forms. Thus Baker in the *Medical Register* of December 8, 1888, reports the case of a male of eighteen years suffering from many convulsions each day who was said to be unable to take the bromides. Nevertheless, he was put on fifty grains a day. This resulted in an arrest of the attacks, but they were supplanted by noisy outbreaks of ungovernable rage, but no delusions. Another case of a young man was met with who had maniacal delusions which always disappeared if the bromides were stopped and the attacks allowed to return. A third case experienced mental confusion when the bromides stopped the attacks. Lepine also reports a case (*La Semaine Médical*, Dec. 23, 1891) of a tabetic young woman who received sixty grains of bromide a day for convulsive attacks. In the course of a few weeks she became progressively weaker and delirious; and Lepine believes that difficult speech, delirium, and mental weakness often followed the use of bromides.

Holmden in *The Lancet* of October 18, 1886, also reports the case of a sailor, aged thirty-three years, who was in the habit of taking three drachms of bromide of potassium a day for the purpose of relieving insomnia, and who began to develop delusions and to be unable to collect his thoughts. Notwithstanding advice to the contrary he persisted in the use of the drug and developed delusions of persecution, maniacal symptoms, and suicidal tendencies, followed by great prostration. Recovery ultimately occurred.

Hameau (*Journal de Médecine de Bordeaux*, March, 1868) has reported the case of a young woman of twenty-two years who after taking no less than four and a half pounds of bromide of potassium in ten months developed cachexia and delirium, and after great prostration she died.

We have also the report of Einger in the *Wiener Medicinische Presse*, Nos. 25-34, 1886, who records the case of a woman who took five pounds in a year, and after developing the ordinary symptoms of bromism developed tremor, a staggering gait, followed in a few hours by excitement passing into delirium, with delusions of poisoning.

Thompson in *The Lancet* for May 11, 1889, asserts that he has frequently seen cases of maniacal insanity produced in feeble-minded persons and in the insane by drenching them with bromides. He does not, however, report any definite cases.

Gaston Lyon in his "Traite Elementaire de Clinique Therapeutique," 1895, says in some cases the bromides have to be stopped when given to epileptics, as they either increase the number of the attacks or, if they stop them, bring on cerebral disturbances.

Marked untoward effects of the bromides are recorded by Soullier ("Traite de Therapeutique et de Pharmacologie," Paris, 1895), who states that in those instances in which a bromide cachexia develops there is in addition to feebleness commencing paralysis of the lower extremities, tremors, coldness, anorexia, and diarrhœa, loss of intelligence and memory, and sometimes delusions, hallucinations, headache of an intense kind, and dilatation of the pupils. He quotes Le Gendre as having seen instances in which the bromides in overdose caused in epileptics symptoms simulating typhoid fever.

Laborde (*Gazette Méticale de Paris*, 1886) has seen sexual excitement followed the bromides, and Winters has reported visual hallucinations (*New York Medical Journal*, 1883). Alexander also quotes Kiernan and Monroe (*Medical Standard*, 1887 and 1891) as having met with cases of aphrodisia from this drug.

One conclusion seems certain beyond doubt, that in many cases of epilepsy the bromides are very capable of causing grave injury aside from the general depressing influence which they excite in all persons if given in full doses for any length of time.

In other instances in non-epileptic patients the use of the bromides has produced aphasia and apyrexia. Thus Lockhart Clarke has recorded an instance of a patient who said "contraction" for "subscription," and E. H. Clarke one who called a buckwheat cake a comb and a comb a buckwheat cake.

## WHY PUBLIC BATHS ARE ESSENTIAL.

Bathing of the human body as recorded in sacred and ancient history was a prescribed sacred ritual for purification, especially for accidental, leprous or ordinary uncleanness. A bathing chamber was probably provided in the houses of the lower ranks in early times, as well as in those of the wealthy, the latter with much elaboration and elegance; these were often in the gardens of the wealthy. The pools of Bethesda, Siloam and Hezekiah are among the first indications of public baths established for promiscuous public bathing.

In all religious ceremonies the high priests were required to purify themselves by bathing before performing religious services; uncleanness of person was considered sinful. Even the leper was commanded to go and wash in the pool of Siloam seven times before he could be made whole.

Body exhalations are impurities oftentimes poisonous, infective and contagious, and which nature by her constant physiological activity in the human system, through sensible and insensible perspiration, endeavors to get rid of; and healthy conditions can only be maintained by removing these poisonous elements from the cutaneous surface by bathing. The millions of cutaneous pores, covering the whole body surface, must be relieved of these exudations or ill health will be the result. Purification increases cutaneous blood circulation, stimulates nerve radicals, eliminates and removes effete and poisonous accumulations, and renders the blood purer, promoting healthy action and strength.

Athletic training of gladiators and soldiers of the olden time among the Greeks and Romans by the daily use of the bath was considered indispensable; and even at the present time no athlete, whatever the sport, can afford to ignore this important adjunct in his preparation for any great physical effort. Common laborers and muscular toilers need the bath quite as much, to remove the effete exhalations from their perspiring bodies, to maintain strength and muscular activity. All health resorts throughout the civilized world hold forth their bathing facilities as great inducements to those seeking renewed health.

The treatment of diseased conditions at the present day is largely relegated to the various water appliances. Impure air, unbathed bodies, ab-

sence of sunlight, are largely the inciting factors of the poisonous germs of typhus, as of less malignant diseases. Where else can one find this combination better than in the densely populated tenement-house districts of large cities ? for here no baths are provided in their airless and sunless domiciles. Impurity, uncleanness and ill health go hand in hand. In the common lodging-houses, again, are found like conditions intensified ; typhus fever—that fatal disease—easily finds lodgment therein.

In the tenements the practice of bathing is almost an impossibility, since a tub filled with water is the only resort. In this limited supply the water soon becomes befouled, and the impossibility of cleanliness by its use is evident. Such conditions do not encourage the practice of bathing.

A bath that does not effectually remove from the surface of the body all impurities and constantly supply fresh, pure water is not a bath of purification. A small modicum of surface dirt may be washed off, but the pores of the skin are but partially relieved of their clogged-up mouths, filled with the effete products of physiological activities ; neither is the cold bath alone sufficient for good purification. Hot or very warm water, with plenty of soap, is necessary to dissolve and remove the oleaginous exudations which are always present.

In the sea-water swimming-baths the alkaline condition of the sea-water is an important adjunct for cleansing purposes, useful and invigorating, provided the water is clean, and free from sewage contamination. Objectionable as this may be, from a sanitary point of view, the popularity of these cooling, pleasure-giving, summer swimming-baths is shown by the enormous number of bathers. It is a pertinent question what number of persons would avail themselves of a system of free public baths with hot and cold water always provided the year round ?

No better system for promoting the public health could be devised except, perhaps, tearing down both front and rear tenement-houses, where impaction takes place and where sunless and airless abodes are the rule. These public baths with hot and cold water would become immensely popular and put to frequent use, affording facilities for a cleanly body the year round.

The hygienic environments that unquestionably surround public bathing establishments and public comfort stations are directly and indirectly conducive to the elevation, both physically and morally, of those now compelled, for want of proper facilities to go unbathed for weeks, months, and even years.

It needs no extended argument to convince any intelligent person that such conditions of personal uncleanness are very great menaces to health and danger to the public. The recent developments of the science of bacteriology have demonstrated the presence of subtle, poisonous germs, and that the body exhalations of an unwashed sample of humanity, with whom one is brought in contact in crowded cars, may, unknown, communicate a deadly fever germ.—*Sanitary Record.*

Mr. W. J. Gage, of Toronto, has recently offered to erect and maintain free baths for public use near the centre of this city. A police census shows that 11,000 people in that immediate locality are unprovided with bathing facilities. It is to be hoped that public-spirited men in other Canadian cities will follow Mr Gage's excellent example.

# OBSTETRICS AND GYNAECOLOGY.

IN CHARGE OF

J. ALGERNON TEMPLE, M.D., C.M., M.R.C.S., Eng.
Professor of Obstetrics and Gynæcology, Trinity Medical College; Gynæcologist Toronto General Hospital; Physician to the Burnside Lying-in Hospital. 205 Simcoe Street.

C. A. TEMPLE, M.D., C.M., F.T.C.M.,
Assistant at St. Michael's Hospital. 200 Spadina Avenue.

## A CASE OF PUERPERAL SEPTICÆMIA TREATED WITH ANTI-STREPTOCOCCIC SERUM; DEATH.

BY J. D. RAWLINGS, M.B. LOND., M.R.C.S. ENG.

Many cases of septicæmia, puerperal and otherwise, have now been published in which the use of antitoxin has been followed by extraordinary recoveries, but I have seen few in which antitoxin has been tried and apparently failed. As negative results in such matters are as important, though not so gratifying, as positive ones, I offer the notes of the following case, in which serum treatment was begun three days after the onset of the disease and was continued until the patient was moribund, the case going steadily down-hill all the time. On the only other occasion when I had the opportunity of trying anti-streptococcic serum the result was the same, but in that case the treatment did not have a fair chance, as it was not begun till twelve hours before death.

A primipara, aged twenty-four years, was admitted on Aug. 24th, 1896, into the General Lying-in Hospital, Lambeth. Pregnancy had reached full term, and the patient was said to be in labor for fifty-four hours. On the evening of admission an unsuccessful attempt had been made to deliver with forceps in the patient's own home. On admission to hospital the patient was in good general condition, showing no constitutional symptoms or local signs of obstructed labor. Fairly strong pains were occurring every ten minutes. The fœtal heart was 156. Pelvic measurement showed a slight degree of general contraction, thus: Distance between the iliac spines, 9⅝ in.; distance between the iliac crests, 10⅛ in.; external conjugate diameter, 7 in.; diagonal conjugate diameter, 4¼ in.; and true conjugate diameter (measured after labor), 4 in. Immediately after admission a vaginal douche of perchloride of mercury (1 in 2,000) was given. Two hours later chloroform was given and forceps applied. There was no unusual difficulty about delivery; the head was brought from the brim to the perineum in half-an-hour; there were no lacerations. The child, weighing seven and a half pounds, was born alive. The placenta was expressed from the vagina. The total amount of hæmorrhage during and after labor was twenty ounces. After delivery the uterus and vagina were very thoroughly douched with perchloride of

mercury (1 in 2,000). A little later the temperature was 99.2° F. and the pulse was 84. On the 25th, twelve hours after delivery, the temperature was 103.6° and the pulse 120, no rigor having occurred. On the 26th the temperature varied from 101.4° to 104.2°, the pulse from 122 to 140, and the respirations from 28 to 36. The patient was sweating freely and had a headache, but no rigors. In the evening there was found to be some superficial sloughing of the lower part of the vaginal wall and vulva posteriorly. The lochia were normal in appearance, odor, and quantity. The vagina was douched with creolin and the vulva powdered with iodoform. Four ounces of brandy per day were ordered. The appetite was good, and the patient slept well at night. On the 27th the patient was bright and cheerful, the temperature varied from 102.4° to to 103.4°, the pulse was 126, and the respirations were 28. The bowels were very freely relieved twice; the tongue was clean; there were no signs of pneumonia, pericarditis, or peritonitis, but the heart's apex was felt one and a half inches ontside the nipple line and hæmic murmurs were heard at the base; the lochia were still normal; the breasts were flaccid. The dose of brandy was increased to six ounces, and digitalis and caffeine were ordered. In the evening a little chloroform was given, and the uterus was scraped with a blunt flushing curette; only a few shreds came away. During the operation creolin (1 in 200) was flowing through the curette: afterwards a quart of plain water was run through the uterus, and this was followed by two quarts of perchloride (1 in 4,000). After the curetting the temperature suddenly fell to 97.8° and the respiration became infrequent and sighing, but the pulse was 100 and of good volume; the extremities were warm and there was no increase of pallor. The patient only slept two and a half hours. On the 28th the patient was still very bright and cheerful. The temperature gradually rose during the morning to 103.2° and the pulse to 120. At noon the uterus was douched with perchloride, when the vagina was looking better than it had done before. At 2 p.m. 9 c.c. of streptococcic antitoxin were injected. In the evening the patient was seeming a little better in herself, but the pulse was intermittent. The temperature was 102.8°. The uterus was douched with perchloride, when a few sloughs came away, and the vagina looked much more healthy than before. A further 9 c.c. of antitoxin were injected. The patient slept for two hours after half a grain of morphia. On the 29th the patient said that she felt better; but she looked worse, and certainly was so. The temperature varied from 102° at 2 a.m. to 98.6° at 10 a.m., twenty hours after the first dose of antitoxin; the pulse was generally 136, but very variable in rate and very irregular. The tongue was slightly furred, but moist, and the appetite was good. Two liquid offensive motions were passed. The lochia were normal, but diminished in quantity. The dose of brandy was increased to twelve ounces. Antitoxin was injected at 1 p.m. and again at 9 p.m., but no fall in temperature occurred. Digitalis, strychnine, and caffeine were given hypodermically. In the evening the patient complained of intense pain in the back, which persisted almost without remission till her death, and was unaffected by morphia. She slept a very little after the administration of one grain of morphia. On the 30th the temperature ranged from 100.4° to 101.4°;

the pulse was 200. A cadaveric odor was present. The patient scarcely slept at all at night, in spite of morphia, which was given hypodermically in doses of half a grain, until three and a half grains had been given in eight hours. On the 31st the temperature was 103.4°. The pulse was 208 and scarcely perceptible at the wrist. She was not in pain for a short time in the morning. She asked for solid food at dinner time, and ate a quarter of an ounce of cold beef and an ounce of mashed potato and drank half a glass of ale. In the evening she ate a whole pear with avidity. There was twitching of the supinators of the left arm. On Sept. 1st the movement of the abdomen on respiration was a little impaired, and there was slight resistance in the left flank. In the evening the twitching increased, hiccough occurred, food was refused, and the patient died at midnight.

*Necropsy.*—Post-mortem the top of the uterus was found to be one and a half inches below the umbilicus, and the weight of the uterus was 14 ounces. There was no general peritonitis, but on the left half of the posterior aspect of the uterus the peritoneum was injected. Douglas' pouch contained about two drachms of free pus. There was no recent lymph or adhesions. Inside the uterus was some blood-stained thin pus, but no retained membranes or placenta. When the pus was sponged off, the surface appeared healthy. The upper part of the vaginal walls was healthy, but contained pus like that in the uterus. There was some sloughing of the lower part of the posterior vaginal wall and the posterior part of the vulva. The true conjugate measured 4 in., and the transverse diameter of the brim was 4⅝ in. There was no thrombosis or pus in the iliac veins. There was no endo- or peri-carditis. The lungs, pleurae, and spleen were natural.

*Remarks.*—Apart from the antitoxin treatment there are some interesting points in the case. It is somewhat unusual for so acute a septic process to be unaccompanied by any rigors. The case is a striking example of the extreme value of a high pulse rate in the diagnosis of puerperal fever. It is not uncommon during the first days of the puerperium for the woman to get a rise of temperature and headache without any localizing signs anywhere and with a pulse well under 100. Such symptoms need cause but little anxiety, and generally disappear after a purge. With a pulse of 120, however, the same symptoms are of the utmost gravity. In the present case, for example, the pulse rate was at first the only indication that the fever was of a serious nature, there were no rigors, the lochia were sweet and plentiful, the patient was bright and cheerful, the tongue was clean and moist, and the appetite good. On the other hand, the bowels were loaded, and that might have been accepted as an explanation of the fever and headache. And yet there was an acute septic process going on which was to terminate fatally on the eighth day. In this connection it is interesting to note that during the twenty hours following the first dose of antitoxin the temperature fell from 103.2° to 98.6°; but as this was unaccompanied by any fall in the pulse-rate it was not regarded as a sign of improvement, but merely as a remission of temperature such as occurs naturally in septic cases; and this proved to be the case. Seeing the extreme importance of early treatment in puer-

peral sepsis, and the great value of the pulse-rate as a means of diagnosis in the early stages, I would lay down the following rule: if in the first three days of the puerperium the temperature rises without obvious cause to 102°, and is accompanied by a pulse-rate of 120 or more, the case should be regarded provisionally as septic; and if the temperature and pulse-rate are maintained for twelve hours and still no satisfactory cause is discovered the uterus should be curetted and douched without further delay. This was not done so early in the above patient's case because her condition was at first thought to be due to septic absorption from the vagina, and it was hoped that vaginal douching would be sufficient; there would, moreover, have been the risk of carrying septic matter from the vagina into the uterus on the douche tube. Dr. Champneys, in his lectures, and Professor Byers, of Belfast, in a paper read before the British Medical Association last July, emphasize the importance of the pulse-rate in these cases; but the point is, I venture to think, not sufficiently insisted on in text-books. Pain in the back of such intensity as in this case is unusual, and nothing was found to account for it before or after death. The patient's tolerance of morphia was extraordinary; in one night she took three and a half grains hypodermically; the tolerance was genuine, for different samples of morphia were used. As so often happens in fatal septic cases, the condition known as euphoria was well marked; although she was being rapidly killed by acute sepsis the patient felt well, was in good spirits, and until the pain in the back began had no idea that she was seriously ill. Six hours before death she recognized her husband and talked rationally to him. No rash of any kind occurred.

I am indebted to Dr. Boxall, under whose care the patient was, for permission to publish the case.

---

## VAGINAL DOUCHING.

Giles (*The Lancet*, May 15, 1897) states that vaginal douching has become such a universal practice, both in the hands of the public and under the supervision of medical men and nurses, that it may be well to review briefly some of the circumstances in which it is required, and the most suitable solutions under varying conditions. At the outset it is necessary to raise a protest against unnecessary and too frequent douching. The researches of Winter, Doderlein, and others have shown that the vagina is normally inhabited by a benign bacillus, to which, through the formation of lactic acid, the acidity of the vaginal secretion is due, and the special rôle of which appears to be to antagonize and disarm of virulence any pathogenic organisms that may enter the canal.

Frequent douching of the normal vagina, especially with soapy and other alkaline solutions, tends to hinder or arrest this beneficent action and to destroy the guardian bacillus. Hence, under the circumstances, morbid conditions are provoked rather than prevented. The same argument applies to the practice of giving a vaginal douche before or during labor, for when this is normal the uterine and vaginal secretions, follow-

ed by the rush of liquor amnii, tend to sweep the passages in the most effective way—namely, from within outward. Secondly, it is necessary to protest against a long-continued use of very hot douches, whether in health or otherwise. Frequently, in inflammatory and other conditions of the pelvic organs, the medical attendant orders douches "as hot as they can be borne." These have their place, and an important one, for their effect in relieving pain and pelvic congestion is often most marked; but this is provided they be used only as a temporary measure. Not infrequently, no later directions are given, with the result that patients continue these hot irrigations, perhaps twice a day, for months, and the means intended for cure becomes instrumental in prolonging and emphasizing the complaint, by inducing chronic pelvic congestion with its consequent leucorrhea. The remedy is simple—namely, that patients should be instructed to regard a hot douche as a temporary expedient, to be replaced as symptoms improve by tepid, cool, and even cold irrigations.

The use of a douche for purposes of comfort and cleanliness must be left in large measure to the discretion of patients; but they should be warned of the harm that may result from its too frequent use, as stated above. Therapeutically, the douche is indicated in three sets of conditions: (1) after labor; (2) after vaginal operations; and (3) in the treatment of inflammatory conditions of the vagina, uterus, and appendages.

1. After labor. When the labor has been normal, with little or no intervention on the part of the attendant, and when the puerperium is also normal, it is open to question whether any form of douche should be used. In skilled hands no harm can result, and in lying-in institutions it is probably an advisable routine procedure; otherwise it is probably better omitted. In cases of postpartum uterine atony or hemorrhage a hot douche is indicated, and when there is reason to fear septic developments a course of douching with mild antiseptics is desirable. In actual septic conditions one or repeated injections of stronger antiseptics may be required.

2. After vaginal operations. Here it is usually necessary to resort to vaginal douches for one or several weeks, either to keep the passages clear of blood, which would tend to decompose and so hinder the healing of wounds, or because there has been much manipulative interference. An aseptic or mild antiseptic solution generally suffices; at times, in septic conditions, a strong antiseptic is needed.

3. In inflammatory conditions. In these cases the douching is generally performed, not by the medical attendant or nurse as in the previous conditions, but by the patient herself or a lay friend. Hence more discrimination is required in prescribing potent solutions. Usually a bland solution is all that is necessary; in a few cases, as in gonorrhea, some stronger antiseptic may be temporarily required.

The fluids to be used for vaginal douching fall into three categories: (1) neutral or aseptic; (2) mild antiseptic; and (3) powerful antiseptic.

1. Neutral or aseptic solutions. Of these the first is plain or sterilized water. For the relief of pelvic pain and congestion this answers perfectly. If a more astringent solution be required we may use alum, one to two drachms to the pint; acetate of lead, one ounce to the pint; chloride

of lead, saturated solution; and permanganate of potash (Condy's fluid) in weak solutions. This is one of the most generally convenient on account of its portability and ready solubility.

2. Mild antiseptic solutions. Among these we may mention: boracic acid or borax, two drachms to the pint; sulpho-carbolate of zinc, two to three drachms to the pint; carbolic acid, 1 in 80 to 1 in 40; tincture of iodine, one drachm to the pint; Condy's fluid, two drachms to the pint; cresol, 1 in 250; lysol, 1 in 250; corrosive sublimate or the biniodide of mercury, 1 in 5,000; or chinosol, 1 in 8,000. Of these, boracic acid, sulpho-carbolate of zinc, and Condy's fluid are perhaps the favorites when prescribing a douche to be used by the patient. Chinosol is comparatively a newcomer, but answers very well. Carbolic acid and iodine are useful for hospital administration. The poisonous character of corrosive sublimate is a contraindication to its indiscriminate use. For milder purposes other things answer as well, and in stronger solutions it should not be used except by the medical attendant. Lysol has the disadvantage of not being readily portable.

3. Powerful antiseptics. These are required after operations, and in obstetric practice, under septic conditions, and in the treatment of gonorrhœa and septic conditions of the vagina and uterus. The most important are: carbolic acid, 1 in 40 to 1 in 20; iodine liniment, one to two drachms to the pint; corrosive sublimate, 1 in 1,000 to 1 in 4,000; and chinosol, 1 in 1,000 to 1 in 8,000. Of the first three we need not speak in detail, as their merits and demerits are well known. The desideratum is a material that shall be portable, readily soluble, non-toxic, and at the same time a powerful antiseptic. From this point of view a few words may be said about chinosol, which answers these requirements, and which, being a comparatively new drug, may possibly not be familiar to practitioners in this country, though used a good deal on the Continent. It is a light yellow powder which belongs to the quinoline group, and is readily soluble in all proportions of water. It is non-poisonous, and for this reason it is especially suitable for use by patients themselves, and its antiseptic action appears to be considerable, being at least equal to that of corrosive sublimate. Where albuminous fluids are concerned chinosol appears to be superior to the sublimate, inasmuch as it does not coagulate albumen; corrosive sublimate, on the other hand, forms an insoluble albuminate of mercury, whereby the antiseptic action is interfered with. Chinosol resembles iodoform in appearance; and if it is intended to be used in dressings or on tampons, as a substitute for iodoform, the chinosol powder requires to be diluted with boracic acid in the proportion of one part of chinosol to five or ten parts of boracic acid.

When strong antiseptic solutions are required for vaginal douching, corrosive sublimate, carbolic acid, and iodine should be used only by the medical attendant; chinosol for use by the patients themselves.

DOCTOR,—Your library is not complete without the HYPNOTIC MAGAZINE. Cost of this handsome monthly, including premium book on SUGGESTIVE THERAPEUTICS, is only One Dollar ($1.00) a year.

THE PSYCHIC PUBLISHING CO., 56 5th Avenue, CHICAGO

## PRACTICAL OBSTETRICS.

BY R. G. WOODWORTH, PUEBLO, COL.

A few suggestions as to my *modus operandi*, under the above caption, may not come amiss, but, on the contrary, be helpful to some of the *novices* in the profession, and not prove unwelcome even to those of broader experience by reason of the years of devotion to the subject.

One point I wish to emphasize is: bimanual pressure as against the use of forceps in tedious labors. In a number of recent cases I have not failed to carry my forceps with me, not so much because I felt they were indispensable as the fact of the mental impression they produce. Not unusually a patient assumes a physician is broader-minded and more skilled if she sees a few instruments, and it also leads her to believe the doctor has fully equipped himself for every emergency in her particular case. Of course, the rule should be to use the forceps if other means fail. As between ergot and the forceps, I would choose the forceps, but as between the use of the forceps and bimanual pressure, I choose the bimanual pressure in the great majority of instances. There are two points which should be considered before thinking of employing the pressure. The first is, are the contractions sufficiently strong of themselves to expel the fœtus? Secondly, is the tenderness of the womb so great as not to admit of pressure? Both of these questions can be decided upon a very casual and superficial examination. When the uterine pains, after dilatation of the cervix, become expulsive, I observe, from time to time, whether any progress is being made, and if so well and good; but, after a given length of time, if the fœtus fails to advance and seems apparently to be lodged, I do not hesitate to use the pressure. How is the pressure applied? I seat myself at the side of the patient with a good-sized pillow on the opposite side of the patient on which to rest my elbow. The arm resting on the pillow, of course, is more or less fixed. The other arm, if it be the right (which is usually the case) can easily be aided by being pressed upon by the right knee. By this powerful means of applying bimanual pressure sufficient force can be brought to bear upon the womb during contraction as shall be immediately apparent in effecting the progress of delivery. It is plain that only sufficient force should be employed as to accomplish the desired end, namely, slight progress. The pressure should be employed only during the contractions of the womb, and a weak and inefficient contraction, augmented by pressure, can be made to accomplish a mighty work in hastening delivery.

I said that a tender womb is a contra-indication to the application of this pressure. It is not necessarily so, for if it be remembered to use the pressure only during the height of the pain the patient seldom complains.

Much of the work in obstetrics in every part of the country is done by midwives, and to say the least, they know about as much about this important branch as swine do of roller skates. If Nature will do the work without their intermeddling, or, to speak more correctly, in spite

of it, the patient is certainly fortunate, the midwife gets the praise, her egotism has gone up a notch, and she is prepared to assume greater risks in the future.

Only a short time ago I was called to assist a woman in delivery who had been in pains for three days with fever, thirst, restlessness and tenderness; the vagina was hot, the uterus exhausted, and the midwife and neighbors frightened. I first gave the woman ten grains of quinine, anointed the vagina, which was dry, with vaseline, and as soon as she began to feel the effects of the quinine I commenced the bimanual pressure. In about thirty minutes the child was born. The question might be asked why I did not give ergot to bring on the pains. The reason is that my experience with the use of this drug before the delivery of the placenta has not been very flattering. In many instances when the drug is used the uterus contracts down on the placenta and imprisons it so tightly as to require much labor and worry to accomplish its expulsion, and even then only at the risk of portions being left behind which necessitate judicious surveillance of the case for some time, with possibly the subsequent evils which occur under such circumstances.

Forceps, like drugs, are exceedingly dangerous except in skilful hands. Bimanual pressure is efficient and free from harm, and the mere novice can employ it with results as gratifying to himself as they have been to me, and at the same time not subject himself to the contempt of the family, which is pretty apt to show itself consequent upon the injury resulting from unskilful or improper manipulation of the forceps.—*The American Journal of Obstetrics.*

---

Creosote in Gastric Affections.—According to Dr. Th. Zangger *(Sem. méd.)*, a mixture made as follows has given him excellent results in cases of infantile gastro enteritis and various dyspeptic conditions:

| | | |
|---|---|---|
| ℞ | Beechwood creosote | 3 drops. |
| | Alcohol | 1 gme. |
| | Gum arabic powd | 10 gme. |
| | Syrup | 30 gme. |
| | Orange-flower water | 10 gme. |
| | Water to make | 100 gme. |

M.

Sig. A teaspoonful for children, or tablespoonful for adults, immediately before each meal

The writer has found that creosote in small doses exerts a particularly favorable action, and that, under its influence, gastric affections and diarrhœa, when due to gastric derangement, rapidly recede.—*Am. Med.-Surg. Bul.*

Carbolic acid also acts in the same manner, and a question which occurs to us is as to whether the good effects observed from the use of the creosote, as indicated above, may not be due to some free phenic acid.

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

## THE NERVOUS SYSTEM IN DISEASE.

BY JOSEPH F. EDWARDS, A.M., M.D., ATLANTIC CITY, N J.,

Fellow of the College of Physicians of Philadelphia; Ex-Member State Board of Health of Pennsylvania; Foreign Associate Member French Society of Hygiene, etc.

Some five years ago a girl of fourteen (a member of my own family), who had all through her life presented every appearance of robust health, after a period of close application to study commenced to present evidences of some little loss of her previously vigorous health; and one day said to me, laughingly: "I am getting paralyzed; I have no feeling in my fingers. You could cut them off and I would not feel it." For two weeks at intervals she would repeat this remark, then run off to her books or play, and no attention was given to these supposedly insignificant and meaningless complaints. It should be particularly noted that the outward, obvious evidences of departure from vigorous health were so insignificant as not to attract attention, and only to be remembered and recalled in the light of subsequent events. This young girl retired one night in her usual health. In the morning she was the sickest-looking child I have ever seen; she presented symptoms of perihepatitis, pleurisy, and, subsequently, double pneumonia, with death from heart failure at the end of two weeks.

In the very beginning of the illness I enquired into the condition of the different organs, to ascertain whether they would be likely to carry her through the contest. In the course of this examination, made at the onset of the disease, I was struck at finding in the urine enormous deposits of the earthy and alkaline phosphates. Owing to personal reasons this case made a deep and lasting impression upon me, and this enormous phosphatic deposit was constantly in my mind, until, so to speak, unconsciously the question evolved itself, whether a broken-down nervous system had not preceded and made possible the development of the disease; whether we are not putting "the cart before the horse" when we teach that prostrated nervous systems are the results of disease; whether prostrated nervous systems are not always a necessary pre-requisite of disease, whether that which we call the result is not, in truth, the cause.

Then I commenced to examine the urine of every patient that came before me, with the invariable result of finding a very great deposit of phos-

phates in all conditions of weakness or prostration, and an extremely slight deposit in disorders not attended by prostration. Then I began adding to my routine treatment for the particular disease under consideration nerve tonics or nerve sedatives, as I would find an excess or deficiency of phosphatic deposit. My results were good; so very good that I found myself securing the reputation of a "specialist in nervous diseases" among my patients.

Then I commenced to look for a theory that would fit into my observation and experience, and I elaborated the following doctrine, a brief outline of which I now submit to my professional brethren.

I have come to regard the various organs and parts of the body merely as agencies for the manifestation of a force that is generated in the nervous system The functions of digestion, assimilation, excretion, circulation, calorification, respiration, and so on throughout the whole list of vital functions, I have come to regard as manifestations of a force generated in the nervous system. Just as one central dynamo may furnish heat, light, motion, or sound, in accordance with the construction of the agency through which the force generated in and by the dynamo is made manifest—so the stomach will digest, the kidneys will excrete, etc., not because of any power resident within, or generated within themselves, but because of a latent resident power incited to activity by the force generated in the nervous system. In other words, my idea is that, while capable of function, no organ can originate within itself the force necessary for its function. The carbon points are necessary for the manifestation of the electric light; the car is necessary for the manifestation of the electric force generated for motor purposes; but neither the carbon points nor the car are capable of generating this force within themselves. The stomach, liver, spleen, kidneys, lungs, heart, etc., are all necessary for the manifestation of vital force familiar to us as life, but not one of those organs can originate within itself this force.

According to this doctrine, we would be compelled logically to regard the nervous system as the vivifying, regulating, controlling portion of the body, and so I took it to be; I did not, and do not, think that I am advancing any new physiological doctrines, but simply that I am suggesting a wider and more universal application of those already taught. So I thought, until I was staggered by the replies received by me from the professor of physiology in one of our leading medical colleges, to some queries bearing upon this question.

1. Is not the nervous system the only portion of the body capable of originating force? To this query our professor replies, No.

2. Can any organ perform its function because of a force or power originated within itself, independently of the nervous system? To this query he replies, Yes.

3. Would functional activity be possible without the force originating in and transmitted from the nervous system? To this he replies, Yes.

Now, while these replies may be in accord with physiological teaching, are they correct?

The affirmative reply to query No. 2 would seem to imply that each individual organ of the body constitutes in itself an entity capable of independent existence. Is this correct?

Does not an affirmative reply to query No. 3 imply that the voluntary muscles possess in themselves the power of contraction and relaxation independently of the nervous system, and, if this be true, why does paralysis of certain muscles follow a remote injury that interferes with the transmission of force from the nervous system to these muscles? If the bladder can perform its function independently of the nervous system, why does paralysis thereof result from injury to the cord? If the heart is a complete entity, capable of independent function, why will destruction of the cerebellum arrest its action?

These queries have arisen in connection with my doctrine that a disordered nervous system is a pre-requisite to the existence of disease.

It seems to me that we can make two grand divisions of all diseased or disordered conditions:

1. Functional derangements, in which there is no alteration of structure; simply a defect in quality or quantity of vital force.

2. Nutritional or organic, for in all organic diseases, not mechanical, the fundamental lesion is an alteration in the structure of the diseased part; hence it is a nutritional change.

If, then, the nervous system originates the force or power necessary for function; if nutrition is a function; if a normal nervous system will originate normal, and an abnormal nervous system abnormal force—does it not logically follow that an abnormal nervous system must precede an abnormal functional or nutritional derangement of any organ, or part, that is not mechanical or produced by a mechanically acting cause? Let it be understood that when I speak of the "nervous system," I am not confining my reference to the brain and spinal cord, but that I include, of course, nerve tissue wherever it may be found. With this understanding, is it not true that the nervous system is the only portion of the body capable of originating force; that a normal nervous system is absolutely inimical to an abnormal condition of any remote organ; and that, in seeking to locate the seat of original departure from health, must we not look for it in some abnormal condition of the nervous system? If my contentions are correct, will it not logically follow that, with organic disease in which some organ is so damaged structurally as to be incapable of perfect function, the measure of function to be derived therefrom will depend upon the quantity and quality of vital or nervous force with which it is supplied, and that the quantity and quality of this force will depend upon the degree of integrity of the nervous system that originates it? Hence are we not compelled to fall back upon the nervous system as the ultimate element in etiology, and to start with it as the primal element in therapeutics?

## REPORT ON NEUROLOGY.

BY A. FERREE WITMER, M.D.

A CONTRIBUTION TO THE PATHOLOGY OF EPILEPSY.—Dr. Collins, of New York, is the author of this paper (*Brain*). After localization of the convulsive movement, the offending portion of the motor-area was excised and examined in two cases. In the first case was found:

(1) Meningo encephalitis, chronic in type, with acute exacerbation; this latter probably occurring subsequent to the operation.

(2) Marked obliterative changes occurring in the bloodvessels of the pia and cortex.

(3) Slow degenerative changes in the ganglion cells.

(4) Softened areas; probably resulting from the obliteration of some of the bloodvessels at the junction of the white with the gray matter.

(5) Replacement of the softened area by true neurologic tissue.

In the second specimen the author noted scattered points of hemorrhage, although the superficial layers of cells, including the small pyramids down to the layer of large pyramids, seemed normal. The large pyramidal cells are diminished both in number and in size while their processes are attenuated. The nuclei, too, are not as distinctly outlined as normally; in many cells no nuclear structure can be made out.

---

Cases of Paraphasia and Word Deafness.—(*American Journal of Insanity*). In this paper, Dr. Worcester suggests that the examination comprise:

(1) Ability to comprehend spoken words, best tested by directions to be followed by the patient.

(2) The memory of words; best tested by requiring the patient to name objects.

(3) Ability to repeat spoken words.

(4) Ability to read.

(5) Ability to write spontaneously, or after dictation.

(6) Ability to copy written or printed matter.

---

Pathology of Epilepsy and other Convulsive Diseases.—(*Journal of Nervous and Mental Diseases*). Dr. Langdon concludes in this article that:

(1) Epilepsy, chorea and probably most convulsive disorders are the dynamical expression of an inhibitory insufficiency, not indicative of an overproduction of nerve-energy, nor due to a molecular irritability *per se*.

(2) That the cause of the inhibitory insufficiency is to be sought in the end bulbs of the collateral processes of various cortical neurons, the situation varying with the type of disease whether inhibitory, sensory, psychic, or motor.

(3) That this defect consists most probably in a structural incompleteness, or a numerical deficiency—possibly of both—in the collaterals referred to.

These defective collaterals may favor recurrences of convulsions in two ways:

(1) By impairing connection with the neuron (inhibitory storage).

(2) By increased resistance to overflow currents, causing a temporary overcharge of motor axis cylinders.

# PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

H. B. ANDERSON, M.D., C.M.,
Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital. 241 Wellesley Street

H. C. PARSONS, M.D., 97 Bloor Street West.

## THREE CASES OF HÆMORRHAGIC DIPHTHERIA.

BY J. W. W. STEPHENS, M.B., LAWRENCE STUDENT OF PATHOLOGY; AND C. D. PARFITT, M.D. (TRIN. TOR.)

From the Pathological Laboratory, St. Bartholomew's Hospital, London.

The escape of diphtheria bacilli into the blood and tissues has now been so often demonstrated that it hardly requires further observations to establish the fact that in fatal cases of diphtheria the Klebs Loffler bacillus may be found in the heart's blood, the lungs, spleen, lymphatic glands or kidneys. We need only allude to the studies of Frosch, Wright, and Kanthack, and Stephens, where numerous references to the works of others will be found. One of the most serious complications of diphtheria, and one which generally portends a fatal issue, is septicæmia or hæmic infection. In most cases when this occurs we have streptococcus infection. This has been especially insisted upon by Wright and Stokes and, since, by Nowack, who apparently is ignorant of the sound work of the American observers. Nowack in 22 cases of fatal diphtheria found the streptococcus 21 times, and 9 times together with the diphtheria bacillus, and once a bacillus resembling the diphtheria bacillus in almost all points, except in virulence. Howard has described a case of endocarditis in which he found an organism which he identified as the diphtheria bacillus, although it was not pathogenic. It is an acknowledged fact then, that in many, if not in most, fatal cases of diphtheria, pyococci, and more especially streptococci, are found in the blood, and this is also strongly brought out by observations made at St. Bartholomew's Hospital, where, in most cases, streptococci have been found after death in the heart's blood or spleen.

During the last two years we have had an opportunity of examining three cases of hæmorrhagic diphtheria, in two of which a complete examination could be made, while in the third the blood was examined during life, and after death the spleen was sent up for examination.

Hæmorrhagic diphtheria is almost always fatal, even with the antitoxin treatment, and the disease is so eminently septic that *à priori* we should expect in such cases to find an infection of the blood. Austin and Cogill cite 58 cases, all being fatal with one doubtful exception. In 12 cases antitoxin was used. Goodall describes 6 cases—only one re-

covered. So far as we know, there are no complete bacteriological observations of such cases to be found in literature, and, therefore, we venture to place our own investigations on record, although we dispose of not more than three cases.

1. The first case we owe to the kindness of Dr. Richards, who sent us the spleen after death. A bacteriological examination revealed the presence of the diphtheria bacillus. The blood examined during life by one of us also showed diphtheria bacilli. These were found to be virulent to guinea-pigs.

2. The second case died at St. Bartholomew's Hospital.

ABSTRACTED REPORT.

*2nd Case.*—Child 13 months, admitted March 12th, 5th day of disease—Membrane on fauces and soft palate; discharge from the nose. Diphtheria bacilli found in throat. March 20th, general erythematous rash; gone by 23rd. On March 26th fresh erythema over buttocks, back, face and abdomen; next day purpuric; on 30th convulsions and death. Temperature had ranged from 100.4 to 103.8 The writers give evidence to show that the rash was not attributable to antitoxine.

Bacteriological examination of the throat during life. Gave B. diphtherias-diplococci streplococci, strephylococci.

Ear, during life, B. diphtheria-diplococci.

At autopsy a general pneumococcus infection was found, B. diphtheria being found only in ear and pharynx.

*3rd Case.*—Child 4 years. Admitted to hospital moribund, and died soon afterward.

Few purpuric spots on body.

Sloughing condition of throat extending slightly into the mouth.

*Post-mortem.*—Bacteriological examination: Heart's blood, kidneys and pharynx yielded B. diphtheria and streptococci; lungs, larynx and spleen, B. diphtheria.

This case is, therefore, one of hæmic infection—the infective agents being streptococci and diphtheria bacilli. In the spleen no streptococci were found, and in the bone marrow no diphtheria bacilli.

It appears, therefore, that here we are dealing with a double infection.

As objections might be raised in some quarters, as has been done on a former occasion, when Kanthack and Stephens described the constant presence of diphtheria bacilli in the lungs of children that died from diphtheria, that the bacilli found in the lungs were not true diphtheria bacilli, but belonged to the "pseudo varieties," we may answer all such objections by means of animal experiments. Forty-eight hours old broth cultures were fatal to guinea-pigs in doses of ·5 c. c. in from 36 to 48 hours; but when mixed with 1 c. c. of antitoxin (Burroughs & Wellcome) they lost their virulence. The effects of broth cultures of the bacilli obtained from the heart's blood, injected in the same doses, were also neutralised by 1 c. c. of antitoxin. We take it that this is specific evidence that the bacillus obtained from the lungs (and blood) was a typical diphtheria bacillus.

We may mention here that at the Pathological Laboratory of St. Bartholomew's Hospital, hardly a fatal case of diphtheria is examined which does not show diphtheria bacilli in the lungs; the bacilli are almost always virulent, and, if so, their virulence is neutrali-ed by diphtheria antitoxin. Microscopical examination of the lungs by paraffin sections invariably shows patches of broncho-pneumonia or capillary bronchitis and diphtheria bacilli in the bronchioles or diseased alveoli. The fact that diphtheria bacilli in fatal cases have escaped to the lungs, rests, therefore, on incontrovertible evidence.

Summing up, then, we have found that in our three cases of hæmorrhagic diphtheria, organisms were present in the blood, and that these were either the organisms of the primary infection, viz., diphtheria bacilli, or pyococci; or diphtheria bacilli combined with pyococci; and we believe that in most, if not in all, cases of purpuric diphtheria, micro-organisms will be found in the blood.

Hæmorrhagic eruptions, appearing during the course of infective lesions or fevers, are generally due to hæmic infections. We are permitted, by the kindness of Dr. Kanthack, to quote from his notes, in several cases, admitted or diagnosed as purpura, pyococci were found in the heart's blood, and in many of the viscera, as, for instance, the liver, spleen, and cardiac muscle; purpura complicates cases of infective endocarditis and traumatic septicæmia, typhoid fever, and even pneumonia; and in all these cases micro-organisms are found in the blood, generally pyococci, but occasionally also the organisms of the primary infection, should these not belong to the group of pyococci, as *e. g.*, the bacillus of typhoid fever.

In one case, examined by Dr. Kanthack together with one of us, the patient is said to have died of peliosis hæmorrhagica, *i. e.* a form of general purpura. After death, true diphtheria bacilli were found in the spleen, typical in every respect, and virulent. There was no history of diphtheria, and nothing was detected suspicious of diphtheria; it must be remarked, however, that diphtheria was not looked for.

We may ask, therefore, was this one of those cases alluded to by Dr. Gee, where the diphtheritic affection of the throat is so slight that the character of the disease is wholly overlooked, and the death of the patient is certified as due to purpura hæmorrhagica? If so, this was such a case of hæmorrhage diphtheria where bacilli were found in the spleen, whither no doubt they had been carried by the blood.—*Journal of Pathology and Bacteriology.*

H. C. P.

---

Deciduoma Malignum: Metastatic Deposit in Brain.—Jurasovsky (*Vratschevnia Tapisky*, writes of a case of deciduoma malignum which developed two years after the expulsion of a vesicular mole. An operation proved fatal. The disease was disseminated. A mass of true deciduoma was found in the cerebrum: it was as large as a plum, and lay in the white substance of the right hemisphere under the parietal convolutions which were flattened, and the cerebral substitute around the growth was somewhat softened. No previous case of secondary deciduoma in the cerebrum has been recorded.

## IS THERE A FATTY DEGENERATION?

Rosenfeld (Fünfzehnte Kongress für innere Medicin, Berlin, June 9 to 12, 1897; *Centralblatt für innere Medicin*, June 26, 1897) has tried to solve, in an interesting manner, the question whether there is such a thing as fatty degeneration, and has arrived at the conclusion that there is no such process. The differentiation of fatty processes into two—infiltration and degeneration—was based on the hypothesis of the origin of fat from albumin, which hypothesis, the author tells us, has been disproved by Pflüger. He (Rosenfeld) has investigated many of the conditions in which fat is apparently formed from albumin, as the fatty liver of phloridzin- and phosphorus-poisoning, and the formation of milk. In fasting animals receiving phloridzin, fat to the amount of 75 per cent. is stored in the liver. But this fat cannot be derived from the albumins of the hepatic cells, for the quantity of albumin in the liver is not materially diminished.

The fat has been carried from the "fat-depots" to the liver, as may be observed in dogs that, having through long starvation become devoid of fat, are then fed with a foreign fat—*e.g.*, sheep-tallow. When such sheep-tallow dogs are given phloridzin, the sheep-fat is carried from the subcutaneous tissue to the liver, in which nearly 50 per cent. of such fat may then be found. In phosphorus-poisoning the fat is also only infiltrated, for in totally fat-free animals phosphorus-poisoning is not able to produce fatty liver, because the fat-depots are empty. If the fat originated from albumin, it is difficult to understand why it is not formed from the abundant albumins present. If the sheep-tallow dog is poisoned with phosphorus, the fat is carried from the depots to the liver, which may store as much as 40 per cent. of sheep-tallow. That the fat in the milk is not derived from albumins was shown by the following experiment: A sheep-tallow slut was allowed to become pregnant, and then received only the leanest meat. The fat in the milk was sheep-fat hence it cannot have been formed in the body of the animal, for then it would have been dog-fat, but must have been conveyed to the mammary glands from the fat-depots.

The theory of a fatty degeneration, the author insists, must be entirely relinquished; in its stead is to be placed that of an albuminous degeneration of the cell; this injury to the cell is followed by the infiltration of fat as a reparative attempt.

The fat of the organism consists of the fat of the food and that formed from the carbohydrates.

---

## SOME COMPLICATIONS AND TERMINATIONS OF INFLUENZA.

A. Fraenkel (*Berliner klinische Wochenschrift*, April 12 1897), in an address on this subject, gives a very good description of influenza-pneumonia. This form of pneumonia is characteristically lobular, the inflammatory process spreading from the bronchi to the alveolar passages and alveoli. Microscopically, these spaces are all densely and almost exclu-

sively filled with leucocytes. In the bronchi their number is so great that they not only penetrate between the epithelial cells, but even cause a partial detachment of the epithelial lining. As the interstitial connective tissue, especially the peribronchial, is often also infiltrated with round cells, the appearance is frequently such as to suggest that the process has already advanced to suppuration. The absence of fibrin is noteworthy, and is one of the reasons why the infiltration has to the naked eye a smooth appearance. The influenza bacillus can, however, produce a fibrinous pneumonia, although the author admits the possibility of a superadded pneumococcus infection in cases of fibrinous pneumonia developing in conjunction with influenza-pneumonia.

As a terminal stage of influenza, Fraenkel mentions, among others, pulmonary gangrene, which occurred in 7.5 per cent. of his cases of influenza-pneumonia. An occasional result of the rupture of a gangrenous area is putrid pleurisy, which may be interlobular, and is then difficult of diagnosis. The arterial and venous thromboses sometimes occurring during the course of influenza, the author ascribes to changes in the intima produced by the poison. Arterio-sclerosis may follow influenza.—*Univ. Med. Mag.*

---

## DO DOCTORS CURE DISEASE?

The public should be educated up to the idea that disease is not altogether an evil; that it is simply a manifestation of morbid conditions present; and that if these are removed at all, it must be, as a rule, by the efforts of nature, through the natural forces of the body—the *vis medicatrix naturae*. To check these efforts without removing the cause of the difficulty is to interfere with the natural process and to make the patient worse rather than better. Physicians should continually instruct their patients that nature is the great physician and that if they are cured at all it must be by the recuperative powers of their own bodies, the duty of the physician being simply to aid nature in accomplishing this.—*Modern Medicine.*

---

Etiology of Chronic Rheumatism.—Chvostek, at the Congress für innere Medicin at Berlin (*Fortschritte der Medicin*, June 15th, 1897), stated that there was no ground for supposing chronic rheumatism to be a disease of bacterial origin. The great variability in the course of the disease is strongly opposed to any such view; the only two characteristic features of the disease are the joint swellings and the transitory duration of these. The most satisfactory explanation is to regard the symptoms as due to toxins, which are produced in the body but are not produced by micro-organisms. Bacterial invasion gives rise to a very different kind of joint inflammation, characterized chiefly by its long duration, and the large amount of swelling which accompanies it.—*Brit. Med. Jour.*

Expulsion of Lizards and Worms.—Dr. G. W. H. Frew of Paradise, Pa., writes that he had a rather unique case in which worms and lizards were passed by the bowels. There were eight lizards and quite a number of worms and none were vomited. "The young man," says Dr. Frew, "was 24 years old and had been suffering for six or seven months with all symptoms peculiar to dyspepsia, intestinal catarrh, etc., and had been treated for same, all to no avail. I treated him myself for the same trouble for one month. His appetite at times was good, and again poor, always a weight and a colicky pain after eating and often nausea and vomiting, sometimes diarrhœa, and again constipation, headache, vertigo, and greatly emaciated, losing at least twenty pounds in three or four weeks. The colicky pains would come on him at any time and would be quite severe at times. I came to the conclusion that there might be something foreign there and gave him anthelmintics only as an experiment, and in less than six hours passed three or four lizards and during the day passed the rest, and quite a number of worms. I kept him on anthelmintics for one week, but only a few came from him. He is improving very rapidly."—*Maryland Med. Journal.*

---

Favus.

℞ Acid carbolic.
Bals. peruv.....āā 10.0
Petrol.
Glycerin.....āā 100.0

M. Sig.—For external use. The hair of scalp should be washed first with liquid soap, then shaved and painted daily with the above solution. —*Khrenitschek.* (*Pediatrics.*)

---

Macbeth up to Date.—Our poetical friend of The *Jefferson Med. Age* gives way as follows:—

"Thyroid of a black-faced sheep
In the cauldron boil and steep;
Brain of pig and spine of dog,
Testes of lascivious hog,
Pancreas of white-faced calf
Plunge in the mysterious bath;
Double, double, toil and trouble,
Fire, burn, and cauldron, bubble!
Medulla of a rabid bitch,
Lain a fortnight in a ditch,
Bacillus of an anthraxed rat,
Cocci grown in putrid blood
Will make the spell both strong and good
Double, double, toil and trouble,
Fire, burn, and cauldron, bubble!"

# NOSE AND THROAT.

IN CHARGE OF

J. MURRAY McFARLANE, M.D.,
Laryngologist to St. Michael's Hospital. 32 Carlton Street.

D. J. GIBB WISHART. B.A., M.D.C.M., L.R.C.P.L.
Professor of Laryngology, etc., Ontario Medical College for Women; Lecturer in Laryngology and Rhinology, Trinity Medical College; Rhinologist and Laryngologist to the Hospital for Sick Children, St. Michael's Hospital, and the Girl's Home; Toronto General Hospital 47 Grosvenor Street.

## OXYGEN GAS

*As a Local Therapeutical Agent in Purulent Discharges from the Nose, Ear and Suppurative Surfaces.*

BY W. PEYRE PORCHER, M.D.

It was the good fortune of the writer while abroad last summer to have the opportunity of visiting a home, under the care of Dr. George Stoker, M.R.C.P.I., of London, for the treatment of old ulcers, burns, chronic otorrhœa, ozæna, and all suppurative surfaces by the local application of oxygen gas. It was clearly demonstrated, both with the microscope and clinically, that the action of the gas was strongly antiseptic, aseptic and analgetic. In addition to this it was highly stimulating, and by its rapid absorptive effect proved itself to be perhaps the greatest of tissue builders known to science. The aseptic and antiseptic influence of the gas is demonstrated because it is generated from chemicals under a high temperature, passed through strong caustic solutions, and finally through a solution of permanganate of potassium, so that it is absolutely free from bacteria.

Suppurative surfaces exposed to it were rapidly freed from all fœtor, and, strange to relate, pain was also abolished; cultures taken from the wound show that the *Staphylococcus albus aureus* and *citreus* rapidly increase, and all other bacteria disappear. It has been supposed either that the other bacteria are starved out by the gas, or that the above-mentioned germs feed upon the others. The wounds were therefore inoculated with a pure culture of these bacteria, and it was found that the healing process was greatly accelerated thereby. It was therefore clearly shown that these germs were really the prime agents in the process of repair, and that their growth should be cultivated and encouraged rather than retarded, as has been supposed heretofore. In spite of the well-proved antiseptic and stimulating influence of the gas, it has been urged that ulcers which were daily washed with warm water and the limb rested would have healed without the aid of the gas. This may be undoubtedly true in some instances, but in cases where the ulcerated surface completely encircled the limb, or covered an area extending from the knee

almost to the ankle, the above theory would be manifestly absurd. Again, in chronic otorrhœa, with polypous tumors in both ears, it would scarcely be likely that the tumors would dry up and fall out with the aid of warm water alone, but I can bear personal testimony to the fact that this has been accomplished under continuous exposure to the gas, and also that I have seen a burned surface ten inches in diameter healed, protruding bone made to exfoliate, and old and intractable ulcers of all kinds entirely healed in a very rapid and satisfactory manner.

Thus far I have confined my personal investigation almost entirely to the local influence of the gas in cases of ozæna and chronic otorrhœa, and the results in the limited time at my disposal have been exceedingly gratifying.

*Otorrhœa.*—The first case in which the gas was used was that of a child of seven years of age of a scrofulous diathesis, who had had a purulent discharge from the ear almost since infancy. About one year ago she was brought to me. Suspecting that the discharge might possibly be caused by poor nutrition, difficult respiration, chronic rhinitis, etc., I removed, under chloroform, quite a considerable mass of adenomatous growth from the vault of the pharynx. The general health of the child improved greatly after the operation, but with occasional intermissions the discharge from the ear continued to be more or less profuse. In January of this year the child was brought back to me and the following condition was found: There was an overpowering fœtor coming from the ear, and the meatus was entirely occluded by a hyperostosis with general hyperæmia of the walls. Wishing to test the effect of the gas alone upon the case, I confined myself entirely to washing the ear out from two to three times daily with warm water, and keeping it exposed to the action of the gas from four to six hours daily. Unfortunately, the parents of the child proved very intractable, and it was only with difficulty that I could carry out the treatment. After persevering, however, for a month or more, the condition of the ear was found to have changed greatly; there was no sign either of fœtor or discharge, and the general hyperæmia had lessened greatly. I then urged the parents to permit me to remove the hyperostosis, fearing a return of the condition. This unfortunately, however, they declined to permit, and the child was taken home, much to my regret. I have since learned that the operation has been successfully performed in another city.

*Otorrhœa.*—The next case was also a case of chronic otorrhœa of long standing in a child of six years. In this case, like the first, the external ear was so narrowed by the prolonged presence of the discharge that the child was almost completely deaf in that ear; the gas was applied here, as before, with daily washing of warm water; but in addition I made an application of nitrate of silver fused on a probe, in order, if possible, more rapidly to reduce the hyperæmic condition. After about six weeks this exact effect was obtained, in spite of the fact that the parents persisted in bringing it to my office through all the changes of climate, cold and damp weather, with constant intermissions, when the weather was so intolerable that to venture out was out of the question. However, when the boy left me there were no signs of discharge or odor. The ear had opened up greatly, and the hearing was somewhat improved.

*Ethmoid Disease.*—Miss M. P., aged sixteen years, was referred to me by Dr. J. A. Mood, of Sumter, for chronic catarrh. She first noticed the catarrh after an attack of measles in 1890. I found the right nostril filled with crusts which she could not remove without much difficulty. The left nostril was not at all involved, but she had suffered greatly from incessant and long-continued headaches. She had consulted many physicians, and among them had spent three weeks under the care of a specialist in New York, who had sent her home with the statement that no improvement could be hoped for in the case. After thoroughly cleansing the right nostril of large masses of accumulated crusts, I detected pus extending between the upper and middle turbinates, and almost complete adhesion of the upper turbinate to the sæptum—the lower turbinate having retracted so much on account of the prolonged presence of the disease that it almost seemed to have disappeared. I broke up the adhesions between the upper turbinate and the sæptum and drilled into the ethmoid cells with the burr drill and the electro-motor, so as to give as free an outlet to the pus as possible. A solution of peroxide of hydrogen was then injected into the opening and it was packed with a strip of iodoform gauze daily.

This operation, as indicated by other writers on ethmoid disease, has had to be repeated frequently, but with great care to avoid puncturing the orbital cavity, and the washing and packing have been removed daily. In order, in addition, to get the full antiseptic and stimulating effect the nasal mucosa has been exposed to the local action of oxygen gas from four to six hours daily. The result in this case has been perfect. She has absolutely no crust formation in the nose whatever, no fœtor of breath, and her headaches have stopped entirely. It is impossible for me to say just how much the oxygen gas was responsible for this improvement, but I am quite sure that I could never have hoped for so perfect a result without its aid. The patient left for her home feeling bright and cheerful, and entirely freed from the low, depressed condition in which she first came down.

It had been my intention especially to report the microscopical study of these cases, but, owing to some accidents and my inability to obtain exactly suitable apparatus, I have been unable to do so. I hope in future, however, to be able to show the micro-photography of each case, so as to demonstrate beyond question the accuracy of the observations made, as well as the results obtained.

The clinical results, however, as I said before, have been extremely gratifying. In each case of otorrhœa on which the gas was used there has been complete and prompt disappearance of the discharge and the fœtor likewise. In ozæna the crusts have ceased forming, the odor has stopped, and the nose has taken on a healthy appearance. Of course it must be said here also that I have not overlooked at the same time any other measures from which my patients might derive benefit. I have given as free outlet as possible to all pus cavities, and have given iodide of potassium internally for its alterative action upon the system and stimulating influence upon the excretory glands; but this did not in any

way interfere with the local influence of the gas upon the organs or change its effect.

The influence of the gas on old intractable ulcers and large raw surfaces was very thoroughly demonstrated to me while abroad at Dr. Stokes' home in London. The ulcers were daily washed with warm water and kept exposed to an atmosphere of oxygen gas. The leg or arm was kept in a box, which was closed by means of a rubber funnel, and there was a glass top on the box through which the process of healing might be observed. The surfaces of the ulcer could be daily seen to become smaller and smaller, until it was completely healed. All pain and fœtor would disappear very soon after the treatment began, and the cicatrices left would be perfectly smooth and filled with blood-vessels. There were none of the usual star-shaped indurations and hard ridges which usually remain after a burn or old ulcer has healed, but the spot would resemble the healthy skin as it appears in the palm of one's hand more than anything else to which I can compare it. The failure of the gas to produce any extremely marked results by inhalation has been supposed to be due to one of two causes: either that the patient failed to absorb enough of the gas to stop the progress of the disease, or else the destruction of lung tissue was so great that the absorption of gas was rendered impossible. However, I am now experimenting with the gas in laryngeal tuberculosis, and I will report the results obtained in a later paper.

Note.—Since the foregoing was written there has been under treatment for laryngeal tuberculosis a patient whose sputa were filled with bacilli, and who could only speak in a whisper. Her voice has been restored, the bacilli have disappeared, her cough has almost entirely stopped, and her temperature is normal. She has an excellent appetite and sleeps well. In her case I have also given creosote internally, and injected guaiacol with petroleum into the larynx.

---

## FATAL HÆMORRHAGE FROM THE REMOVAL OF ADENOID VEGETATIONS.

Schmiegelow (*Monatsschrift für Ohrenheilkunde*, 1897, No. 3; *Centralblatt für Chirurgie*, August 14, 1897) reports a case not his own, but occurring in the practice of a surgeon who had often done the operation without mishap. The patient was a boy, twelve years old, who showed nothing strikingly abnormal beyond a pronounced adenoid habitus and scrofuous glands in the neck. The operation was done without anæsthesia, and the ordinary Gottstein annular knife was used. Without any warning, a sudden gush of arterial blood issued from the mouth and nose. In spite of prompt tamponing and subcutaneous and intravenous saline injections, death occurred in a few minutes. The internal carotid artery was found to have been opened just in front of its point of entrance into the carotid canal of the pars petrosa ossis temporis. The author supposes that swollen glands had pushed the vessel forward, so that the pressure of the knife caused its rupture, for it was not cut.

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* Dr. J. L. Davison, 20 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* Dr. G. P. Sylvester, Business Manager, 585 Church St,, Toronto.

**The Largest Circulation of any Medical Journal in the Dominion.**

## Editorial.

### MODERN METHODS IN MEDICAL TEACHING.

It may be of interest to many, and should be to all, to collate ideas on the changes that have occurred in the teaching of the medical sciences due to the modern advances in medical knowledge. The first thing that strikes even the least observant is the enormous increase in the extent of the ground to be covered by the student. Even in the past ten years this increase is perhaps little understood by either student or practitioner, as each is ignorant of either the new or the old conditions, and therefore not in a position to institute a comparison. The teacher of medical subjects who is trying, as best he can, to keep up in the race, is perhaps the only one who can form a correct judgment on the matter. The recent very general increase in the length of time to be spent on the curriculum in all English-speaking communities is abundant evidence that a change has taken place; for both in the United States, in England, and in Canada, the old requirements of at least four terms of six months have been lengthened out by summer sessions and such devices, till now from a period of often only eighteen months actual study, there has grown a course of at least forty-five months in Britain (five winter sessions of six months and as many summer sessions of three months) and in Ontario four six months winter sessions, one ten weeks summer session, and a fifth year of twelve months, or thirty-eight and one-half months. These remarks refer, of course, to medical schools of good reputation only, as there are still many schools, mostly outside the British Dominion, turning out half-baked "Doctors" to prey upon the public. From the point of view of the schools the change is not entirely, at first sight at any rate, in their interests. The staff has had to be not doubled only but often quadrupled, and with this, of course, expenses have run up very largely, much more rapidly than the fees of the students have increased.

This process has implied a good deal of interference with the ideas and with the emoluments of the men longest engaged in the colleges, and the manner in which the veterans of the schools have responded to the demand of the past ten years shows a measure of disinterested regard for

medical science, and of disregard for their own pockets and vested rights, which does them very great credit.

From the point of view of the student, the subject cannot be treated of within the space of one article. To refer first of all to the subjects taught in most British institutions as *primary* subjects, one may select as the most important the two "Institutes of Medicine," anatomy and physiology. The subsidiary ones of chemistry and materia medica, and the still less important ones of botany, zoology and embryology, will be referred to later on.

As to anatomy, it has come in the modern dissecting-room to be taught to every one in the class, not merely to the assiduous dissector who has always gotten the subject up with thoroughness, but to the tail of the class, with an abstract precision and plenitude of detail which seems sometimes to indicate that the teacher wishes to become the rival of the Professor of Mathematics. The subject, certainly, can be made to approach very close to one of the exact sciences, and from a disciplinary point of view, or as a piece of mental gymnastics, should be so taught to a class of students in natural science. For this purpose the anatomy of the cat, dog or rabbit, is quite as useful as that of the human animal. But it would seem sometimes that admitting all the usefulness and broadening intellectual effect of comparative anatomy and morphology, teachers of students who are to earn a hard living as medical practitioners sometimes exact too much of their classes, and forget not only the use to which the student is going to put his anatomical knowledge, but the fact that there are other subjects vitally important to the student. The more thoroughly any subject is taught the better, of course, but the balance between the subjects must be observed and the needs of the student borne in mind, not as a man of abstract science, but as the future surgeon or physician. We shall discuss the subject further in our next issue.

---

THE X-RAY IN COURT.—A Chicago judge has recently decided that the X-ray is not competent evidence, and has excluded it from his court as testimony. This seems strange, in view of the fact that on two occasions, in New York and once in Ohio, this agent has been admitted to be proper evidence.

In the case in question, a man employed in a printing office was injured about the ankle by a piece of machinery falling on it. He brought suit for damages, claiming the leg had been crushed. It would seem as if this was a very good case for the machinations of the ray. The injury might have been confined to the soft parts or involved the bones also.

The whole incident clearly shows the great difference between law and medicine. The former is governed by precedent, and seems centuries behind its sister profession. The doctor is at liberty to take advantage of each new development or discovery, and is quick to do so. The lawyer has to grope in the musty records of the past and ascertain what Blackstone, or Coke, or Lord Mansfield thought, or wrote, before he can makeuse of his knowledge.—*Railway Surgeon.*

**A. DUNDERHEAD FOOL, M.D., IN ACCOUNT WITH BAMBOOZLE LODGE.**

| Dr. | Cr. |
|---|---|
| 1. Loss of self-respect<br>2. Loss of professional fellow feeling.<br>3. Loss of good opinion of colleagues.<br>4. Inability to obtain good consultation.<br>5. Necessity of going into pot house politics.<br>6. The final ousting by a master politician.<br>7. Temptation to slight cases.<br>8. The loss of good pay patients.<br>9. The robbing of colleagues of their patients<br>10. The being at the mercy of worse than paupers.<br>11. The temptation of prescribing cheap medicines.<br>12. The temptation to prescribe unnecessary medicines when the druggist furnishes it, to get the commission thereon.<br>13. General dissatisfaction. | The Almighty dollar, grudgingly given, doubly earned, and less frequently seen.<br><br>—*S. Calif. Practitioner.* |

---

Diet in Typhoid Fever.—Frederick C. Shattuck, Professor of Clinical Medicine in Harvard, in a short article in the *Dietetic and Hygienic Gazette*, Aug., 1897, pleads for more liberal feeding of typhoid patients and a larger dietary than is usually allowed, stipulating that the food be nutritious, and one having a residue not mechanically irritating. The following is a suggestive and illustrative diet: - -

1. Milk, hot or cold, with or without salt, diluted with lime water, soda water, Apollinaris, Vichy, peptogenic and peptonized milk, cream with water (*i. e.*, less albumen) milk with white of egg, slip, buttermilk, Koumyss, matzoon, milk whey, milk with tea, coffee, cocoa.

2. Soups: beef, veal, chicken, tomato, potato, oyster, mutton, pea, bean, squash, carefully strained and thickened with rice (powdered), arrowroot, flour, milk or cream, egg, barley.

3. Horlick's food, Mellin's food, malted milk, carnipeptone, bovinine, somatose. [We found in a recent severe case, trophonine most excellent —Ed.]

4. Beef juice.

5. Gruels: strained cornmeal, crackers, barley water, toast water, albarrun, water with lemon juice.

6. Ice cream.

7. Eggs, soft boiled or raw, egg-nog.

8. Finely minced lean meat, scraped beef. The soft part of raw oysters. Soft crackers with milk or broth. Soft pudding without raisins. Soft toasts without crusts. Blanc mange, wine jelly, apple sauce and macaroni.

The various medical and surgical societies have resumed their winter sittings. The three important societies of the city are, of course, the Toronto Medical Society, the Clinical Society, and the Pathological Society. Of the Toronto Medical Society the officers for the current season are: President, T. F. McMahon; 1st Vice-President, Wm. Britton; 2nd Vice-President, J. Hunter; Corresponding Secretary, H. C. Parsons; Recording Secretary, J. N. E. Brown; Treasurer, G. H. Carveth; Council, W. J. Wilson, J. E. Graham, C. J. O. Hastings. The officials of the Clinical Society are: President, A. A. MacDonald; Vice-President, F. LeM. Grasett; Corresponding Secretary, F. Fenton; Recording Secretary, J. N. E. Brown; Treasurer, W. H. Pepler. The Pathological Society is officered as follows: President, H. B. Anderson; Vice-President, A. Primrose; Recording Secretary, H. C. Parsons; Corresponding Secretary, J. A. Amyot; Treasurer-Curator, J. J. McKenzie. There exist, also, several private reading or journal clubs, which do excellent work not only in the programmes submitted, but in the professional and social intercourse which they foster; for it is eminently true of medical circles that "as iron sharpeneth iron, so doth the countenance of a man his friend." We bespeak for all of these organizations a most prosperous winter's work.

---

To Cut Short an Eruption of Herpes.—According to the *N.Y. Med. Jour.*, in the *Jour. des Praticiens* for June 26th, M. Leloir is cited as being of the opinion that it is possible to arrest the evolution of herpes by applying to the affected surface as soon as the initial redness shows itself a pledget of absorbent cotton soaked in a 1-to-50 alcoholic solution of resorcin, a 1-per-cent. solution of thymol, a 3-per-cent. solution of menthol, a 1-to-400 solution of carbolic acid, a 1-to-50 solution of tannin, or the following:

℞ Resorcin.....3 parts.
Cocaine.....1 or 2 parts.
Alcohol .....100 parts.

The cotton should be covered with an impermeable tissue to prevent evaporation.—*Am. Med.-Surg. Bull.*

We have employed an analogous preparation, and found it most effective in herpes progenitalis, one of the most trying and annoying affections which occur about the genitalia.—*St. Louis Med. Journal.*

---

A Cosmetic Laparotomy.—(*Boston Med. and Surg. Journal.*) Küstner, of Breslau, has proposed a transverse skin incision in the fold of skin which often occurs at about the upper limit of the public hair in women. This superficial incision being well retracted, the ordinary median incision is made in the linea alba. The linear skin cicatrix is rendered almost invisible by the public hair and the natural crease in the skin.

---

An enquiry from far-off Japan for anything is somewhat interesting, but the Lancet is in receipt of a letter from a practitioner in Yokohama asking where he could procure Styra-Phenol. We gladly furnished him with all particulars.

# The Canada Lancet.

VOL. XXX.] TORONTO, DECEMBER, 1897. [No. 4.

EDITOR:
JOHN L. DAVISON, M.D.

ASSOCIATE EDITORS:

*Surgery*:
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine*:
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology*:
J. ALGERNON TEMPLE, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics*:
CAMPBELL MEYERS, M.D.

*Pathology and Bacteriology*:
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat*:
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D

*Pædiatrics*:
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M.D.

*Eye and Ear*:
G. STERLING RYERSON, M.D.
C. TROW, M.D.

*Genito Urinary Surgery*:—G. P. SYLVESTER, M.D., Business Manager

## CHRONIC ENDOMETRITIS; ITS CAUSE AND TREATMENT.

BY JOHN W. S. M'CULLOUGH, ALLISTON, ONT.

(Read before Ontario Medical Association, June, 1897.)

Before taking up the consideration of this affection it will be of interest and value to study briefly the anatomy of the endometrium.

There is a considerable difference between the lining of the cervix and that of the body of the uterus. The corporeal endometrium begins at the internal os and lines the whole of the inside of the body of the uterus, and further extends in a modified form into the openings of the Fallopian tubes. It is firmly attached by means of a stroma of connective tissue to the underlying muscle. From this connective tissue there radiates an irregularly arranged fibrillar tissue, found in lymphoid structures only. Attached to and between these fibrillar bands are innumerable lymphoid cells of various sizes. The endothelial covering consists of a single layer of ciliated cylindrical cells. The utricular glands, which are lined by the same variety of cells, are merely deep depressions of the mucosa. The lymph spaces in the mucosa extend to the spaces between the bundles of muscular fibres. The lymph vessels are most abundant in the external muscular layer, are connected with the lymph vessels of the mucosa and serosa, and run to large canals at the side of the uterus. The serosa has lymph vessels only, arranged in a net-work, which, while less numerous than those in the

subserous tissue, are much larger. Thus, we see that the lymph passes from the lymph spaces of the mucosa into the spaces and vessels of the muscularis, surrounds all the muscular bundles there, joins the lymph vessels of the serosa, and then *passes into large tubes in the broad ligaments.* The uterine mucosa is then either an open lymphatic gland or a lymphatic surface intersected by blood-vessels; the lymphatics being not mere vessels, but spaces between the bundles of connective tissue.

The cervical mucous membrane belongs to the class of true mucous membranes. It is dense, hard, and free from lymphoid elements. It also rests upon a sub-mucous connective tissue. Its numerous glands are of the compound racemose type. The membrane is thrown into interlacing folds (arbor vitæ), and is covered by columnar epithelium, which is ciliated in places. On its vaginal aspect, however, the epithelium is of the squamous variety. The lymphatics of the cervix are not so numerous as those of the body of the uterus. They pass, in connection with those of the upper part of the vagina, to the iliac and obturator glands. Septic peritonitis, when its source is in the uterine cavity, is conveyed not altogether nor mainly, as was formerly taught, by way of the Fallopian tubes. Its pathway is mainly through the lymph system just described, and hence the importance, in cases of septic disease within the organ, to remove the source of infection.

*Causes.*—The causes of chronic endometritis are practically those which enter into the etiology of most of the diseases peculiar to women. At the bottom of all are the two factors, *ignorance* and *neglect.* The causes are:

(1) Imperfect development of the sexual organs.

(2) Gonorrhœa.

(3) Septic infection following childbirth.

(4) Lacerations due to childbirth.

(5) Includes various factors, as constipation, errors in living, and errors in dress.

It is generally conceded that there is eventually in all cases a bacterial origin to the discharges. To study these causes a little will be of benefit.

(1) Imperfect development of the sexual organs. To this class belongs the neurotic woman. Her symptoms consist, in the main, of various nervous disorders, such as headache and other neuralgias, sleeplessness and a general more or less hysterical condition. In this class the menstrual function is often delayed and pain of a paroxysmal character is often complained of at the monthly period. Two classes of women are so affected. In the one there has been too much mental effort; as a girl the sufferer has been pushed at school. Her mental tasks have been beyond her bodily powers, consequently she becomes nervous, emotional and sleepless, has a poor appetite and difficult digestion. In the other the mental effort has been trifling, but poverty has necessitated a too great physical effort. The mill, the factory and the sweat shop have contributed, along with want of fresh air and sunshine, to "crowl" the body. From such causes the vital forces have been so reduced that the various organs, and especially the uterus, have been ill-fed and poorly developed. The infectious diseases, as scarlet fever, diphtheria, measles and whooping-cough, impoverish the blood and set up inflammatory processes which permanently damage the sexual organs.

2. Gonorrhœa is seen as a cause less frequently by the country practitioner than by his city brother. In 1873, when Emil Noeggerath first called attention to this disease as being productive of inflammatory diseases of the uterus, his ideas were vigorously opposed, but a quarter of a century's thought has changed opinion, and the position taken by this veteran teacher has been confirmed by the light of modern research. At the present time gonorrhœa is regarded as one of the greatest, if not the chief cause of uterine diseases.

(3) Septic infection during the puerperium, especially from neglected miscarriages, is a prominent cause. The majority of women do not consider a miscarriage at all so seriously as they should, and many women pass through an accident of this kind without taking an hour's rest from their ordinary duties. They invariably pay the penalty some time. This and the previous one are generally considered to be causative of at least ninety-five per cent. of uterine and other female diseases.

(4) Lacerations due to childbirth, directly by sepsis and indirectly by the induction of displacements, frequently produce chronic endometritis. Tears of the pelvic floor are almost certain, if left unrepaired, to produce a sagging down of the uterus and its appendages. The vessels of the pelvis become distorted and there results uterine congestion.

(5) Constipation is a bad habit amongst women. It predisposes to uterine congestion and retro-displacement. An overloaded rectum pushes the cervix forward, and straining at stool topples the fundus backward. The general health suffers, and there is want of tone in the tissues due to loss of appetite, poor digestion and contamination of the blood from fecal absorption. In the society girl it is produced by exposure of the arms and a large portion of the chest, whereby the blood is driven into the interior of the body, congesting the uterus along with other organs and interfering with the action of the heart and lungs; the numerous meals at irregular hours of stimulating and indigestible food; the position assumed in dancing, and the exposure and lack of rest during menstruation. In the school-teacher and the shop-girl the constant standing serve as an efficient exciting cause.

*Classes of the affection.*—Usually chronic endometritis is classified as the *catarrhal*, the *septic* and the *specific or gonorrhœal*. Until recent years it was considered that the young girl and the woman who had passed the menopause were exempt from chronic endometritis. Of late years, however, certain gynæcologists, notably Sexton, Skene and Mundé, have described a similar affection found in virgins and in women after the climacteric. Though designated *virginal* and *senile*, respectively, they are merely one or other of the varieties already mentioned, with certain characters peculiar to the time of life at which they occur.

*Treatment.*—Preventive treatment is *the* great necessity. The two factors in its etiology, viz: ignorance and neglect, should be met with the application of the principles of care and knowledge. Young girls at the age of puberty require such care as will secure to them a proper chance for a normal sexual development. Their mental and physical tasks should not be too great, and a knowledge of the principles of physiology and hygiene will be of benefit. Gonorrhœa is, in both sexes, often very

imperfectly treated. The victim frequently considers it anything but seriously, and as a consequence is often content with treatment by the druggist or the itinerant prescription. As a result, the disease is frequently doctored into a chronic stage and left a focus for the spread of a most destructive process. Cases of gonorrhœa should be most carefully treated, and kept under observation until cured. If not, some one, and often the innocent one, suffers.

Lacerations should be searched for and repaired on the spot. I know they are often left untouched; perhaps, in many cases, their very existence remains unknown. Every effort should be made by careful asepsis in our obstetric cases to prevent puerperal infection. Patients should have a good rest in bed after confinement or miscarriage, and especially if nursing, they should have not the sloppy food thought necessary by the ancient midwife, but good, wholesome, nutritious diet, plenty of fresh air and careful nursing. The evil effects of constipation are not always appreciated by those confided to our care. The female sex requires, both in this respect and in the matter of dress and habits of life, a good deal of teaching. I am of the opinion that, with the increase during late years of good trained nurses, and, too, the advent of the female physician, a great deal of good will result to our womankind.

In the matter of curative treatment, the removal of all causes which retard recovery, the use of proper constitutional treatment, freedom from excessive mental and physical tasks, with the addition of fresh air and sunshine, are material helps to a good result.

There have been many modes of treatment advocated for the cure of chronic endometritis and of the troubles which follow in its wake. In the mildest catarrhal cases much good will result from proper use of medicated hot douches. Depletion by the use of boro-glycerine tampons, applications to the cervix and vault of the vagina of various agents, such as ichthyol or Churchill's tr. of iodine, the use of leeches or the scarificator are all of service. In the severer forms, where the endometrium is lined with fungous growths, or where the discharges are purulent, or muco-purulent, these forms of treatment are but trifling with a dangerous disease. A woman with a purulent or muco-purulent discharge from the uterus, if it depends upon gonorrhœa or sepsis as a cause, is in daily danger, if she has not already reached that stage, of salpingitis or pelvic peritonitis, the latter of which may be conveyed not only by the tubes, but also by the lymph system already described. At best the routine treatment already mentioned is tedious and trying to a patient, and often its results are most discouraging.

From the use of electricity great results have been expected. I am sorry to say they have not been realized. Electricity, however, is a valuable adjunct to other methods of treatment, just as are drugs and constitutional measures of various kinds. The use of the negative pole in the cervical canal will produce dilation and establish freer drainage. This makes it useful. It is a valuable nervine tonic. The cost of a proper apparatus is so considerable that the general practitioner will usually find it to outweigh the profit. This objection may ere long, I hope, be much obviated.

At the present time, I think, the most generally accepted treatment of chronic endometritis rests upon the principle of treating the diseased organ as an ordinary abscess cavity, that is, by thorough aseptic cleanliness and the establishment of free drainage. Whatever plan will most successfully accomplish these ends will, I firmly believe, be the most curative. The various methods of procedure have each their advocates, and the individual operator will have to decide for himself what particular plan he will adopt. In the matter of divulsion of the cervix opinions differ. By some it is considered a dangerous proceeding, by others, if carefully done, to be devoid of danger. Some stretch the cervix quickly and forcibly to the extent of one or two inches; other equally prominent and successful operators do this part of the operation to a greater or less extent and more slowly. Some advise division of the cervix. All, I think, are agreed as to the value of careful asepsis. Then again regarding the curette. It is advised by some that the body of the uterus should be curetted only with a blunt instrument, using the sharp curette for the cervical mucous membrane. On the other hand, the majority of surgeons, perhaps, incline to use the sharp instrument for the whole endometrium. In the matter of after-treatment, there is likewise a diversity of opinion. Some advise that the uterine cavity be packed tightly with iodoform gauze, claiming that thereby we get better contraction of the organ and better drainage: others say that the uterine cavity should never be tightly packed, but that the gauze should be inserted loosely, reasoning that if we must use a foreign body within the uterine cavity, the less of it the better. There are others, too, who claim that iodoform gauze, or in fact any gauze containing a fixed material, does not drain, and that the discharge which is apparently drained from the uterine cavity is merely a secretion from the cervical canal. The stem pessary as a means of drainage still has its advocates.

Some of the best gynæcologists advise cauterization of the cavity after a curetting, using such caustics as carbolic acid, iodine, nitric acid, or solutions of chloride of zinc, while others who claim an equal success are content with flushing with sterilized water or a milder or stronger antiseptic solution. It is not my intention to discuss the values of these various forms of treatment, though I shall be glad if you will do so. I shall content myself with giving a short description of the plan of treatment I have myself used and with which I am very well satisfied.

In some cases it may be well to let the patient have a course of constitutional treatment before operation, but in the majority of cases they will much more rapidly show the effects of such treatment when it is used after operation. For several days previous to operation I am accustomed to give repeated doses of magnesiae sulphas, so as to have the bowels well cleared out, this tending to prevent, to some extent, much of the after-vomiting, flatulence and indigestion. It is essential, too, if any additional operation, such as a perineorraphy, is to be done. The vulva is shaved, or, at all events, thoroughly scrubbed, the vagina thoroughly cleansed and douched with a solution of 1-1000 bichloride, 10 per cent. creolin, or 1½ per cent. lysol, as may be preferred. In short, every precaution is taken to avoid carrying anything of a septic nature to the

uterus. The instruments are boiled in a weak solution of bicarbonate of soda, and instead of sponges I use sterilized borated cotton. These details being completed and the patient anæsthetized, the cervix is drawn well down, and if patulous enough the Goodell dilator passed in so as to engage the internal os. If any difficulty is found in passing this instrument, Palmer's smaller instrument, or the graduated hard rubber ones of Hanks, may be first used until dilation sufficiently great to allow of the passage of the larger instrument is reached. In the absence of the smaller instruments I have used a slender pair of uterine dressing forceps. The cervix is dilated slowly, using the pressure of the hand rather than the screw. Its position is changed from one side to the other to avoid too great strain upon any one part. I usually dilate to the extent of 1½ inches, consuming about half-an-hour's time in the operation. The irrigator containing hot sterilized water plays upon the seat of dilation all the while. In case of a very long, slender, or conical cervix, it may be sometimes necessary to slit it up, and in one case I amputated about one inch of such a cervix. The cavity of the uterus is then washed thoroughly with a solution of bichloride or other antiseptic, and using a large, sharp curette, the whole endometrium is carefully but very thoroughly removed. A smaller instrument may be used to advantage in the cornua and about the internal os, as it is most particular that these parts be thoroughly cleared out. The grating of the curette upon the underlying muscular tissue indicates when the operation is properly completed. The cavity is again washed out with an antiseptic solution, dried, and, if a purulent case, swabbed with pure carbolic acid. In all cases I pack the cavity fairly full of iodoform gauze, which is cut in a strip about an inch wide. The end projects into the vagina, where a loose pad of the same material is placed.

At the same time it is well to do any supplementary operation such as trachelorraphy, perineorraphy, or colporraphy, which may be necessary for a proper cure of the case. The patient is then put to bed, and the gauze is allowed to remain in the uterus for from two to eight days, that in the vagina being changed as often as it becomes saturated. After the removal of the gauze the uterine cavity, so long as there is any discharge, had best be washed daily, or every other day, with a mild antiseptic. Some cases, however, do not require this. Rest in bed for three or four weeks is essential. In case the chronic endometritis is associated with salpingitis or pelvic peritonitis there arise, according to Pryor (*American Journal of Obstetrics*, May, 1892, pp. 610), three questions which require consideration :

(1) If we do a laparotomy in such cases, is the endometritis cured ? To this he answers most emphatically, *No.*

(2) Is the complication due to the endometritis ? To this he answers, *Yes.*

(3) Shall the endometritis be treated before doing a laparotomy or afterwards ? To this he gives rather an affirmative answer, saying, however, that it is a mooted point. He goes on to say that there are some slight cases of endometritis associated with cysts of the tubes, serous or purulent, and with implication of the peritoneum. Here it is useless to

expect amelioration of the tubal disease by doing a curetting. But in all cases of tubal disease associated with peritonitis, and in all other cases of peritonitis, where the uterus is the seat of a purulent inflammation, he strongly advises a curetting some time before a laparotomy is determined upon. If this is done in cases of purulent peritonitis often a permanent radical cure will be effected without further surgical interference. The source of the sepsis is removed, and when laparotomy is performed later the peritonitis is gone and there is nothing left but the remains of a peritonitis and tubal disease. The acute inflammatory action will have subsided and there will be less hemorrhage and less necessity for drainage. A few words as to the treatment of virginal and senile endometritis, and I am done.

Senile endometritis is usually a chronic endometritis, with decomposition of the retained discharges, due to a contracted internal os. The treatment is divulsion—and this must be very cautiously done, as these old and often atrophied uteri may rupture very easily—curetting, and then applications of caustic preparations, as nitric acid, carbolic acid, or iodine, followed by the use of silver and free drainage. Regarding the cause, Mundé says: "I confess that I do not feel able to account for the occurrence of this affection."

In the virginal form Mundé advises curettage of the corporeal endometrium with a blunt, and the cervical lining with a sharp instrument. Penrose advises amputation of the cervix. These manipulations should be followed by proper drainage.

Tight corsets, exposure of the feet to cold, long engagements and chronic constipation, are regarded by A. Lapthorn Smith to be the chief etiological factors. It will be of value to improve the hygiene and general health. Howard Kelly examines virgins in the knee-chest position, and advises against very active local treatment.

It is quite likely that some cases of intractable dysmenorrhœa in virgins may depend upon this form of endometritis.

## COMMUNICATIONS, ETC.

*To the Editor of* THE LANCET.

SIR,—THE LANCET and other medical journals contain the proceedings of the British Medical Association, and among the very interesting addresses given is one by Dr. W. Mitchell Banks, upon which with your permission I will make a few remarks. I refer more particularly to that part of his address where he refers to the life and labors of that eminent French physician and surgeon, Ambrose Paré. Dr. Banks gives the credit to Paré as being the inventor of the ligature as applied to the stoppage of hæmorrhage instead of the cruel methods in use in his day of using hot irons, boiling oil, etc. The Doctor says: "There are, of course, some persons who wish to make out that he (Paré) was not original in the matter of ligature;" then quotes what Ambrose Paré says about it himself, as follows: "Taught me as I interpret it by the suggestion of some good angel, for I neither learned it of my masters nor of any other man," etc.

I grant that this quotation might be taken as evidence that Paré claimed to be the inventor of the ligature, but I understand him to mean that it was not taught, nor had he seen it in use nor heard of its use by any surgeon, in his day, I have in my possession the medical works of Ambrose Paré, an English translation by T. Johnston, and published in the city of London by M. Clark in the year 1678, about one hundred years after the original work was published by its author. The work I have is bound in one very large volume. The original was divided into twenty-nine books. I give the translation of that part referred to by Dr. Banks. It reads as follows: "Wherefore I must earnestly entreat all chirurgeons that they leave this old and *too, too* cruel method of healing and embrace the new, which I think was taught me by the special favour of the Sacred Deity, for I learned not of my masters, or of any other. Neither have I at any time found it used by any. Only I have read in Galen that there was no speedier remedy for stanching the blood than to bind the vessels through which it flowed towards their roots," etc. To my mind the above quotation goes to show that Paré got his idea from Galen and other authorities; and this is not all. I could give numerous quotations that he did not claim to be original in the matter of ligature. In his address to Henry the Third of France, to whom his medical works were dedicated, he says as follows: "See here then, my little good man, the authorities which command you to tie the vessels teaching and discoursing of the flux of blood, and how to stop it by means of the ligature of the vessels." Then follows a lengthy quotation. He also refers to eleven other authorities in support of what he terms his "new method of applying the ligature." Paré appears to have met with great opposition from his confreres for taking a decided stand in his "new method," and to him is due the honor of bringing into general use the application of the ligature. Ambrose Paré was a man endowed with great wisdom and independence of thought, of sterling integrity, and very sympathetic in his nature. In his Apology, Book 29, he refers to his persecutors in the following language: "Truly I have not put my hand unto my pen to write on such a thing, were it not that some have impudently injured, taxed, and more through particular hatred disgraced me, than for the zeal or love they have for the publick good, which was my manner of tying the veins and arteries;" and again he says in another place: "O, what sweet words are here for one who is said to be a wise and learned Doctor; he remembers that his white beard admonishes him not to speak anything unworthy his age, and that he ought to put off and drive out of him all rancour and envy conceived against his neighbour," etc. I write the above in all deference to the ability and position that Dr. Banks occupies, but I felt it but due to the history of so important a surgical subject, and being in the possession of proof, to correct the statement. The work I have is interesting from the standpoint of the history of medicine and all that subject pertains to. The surgical instruments in use in the fifteenth century, plates of which are given, are of the crudest make. The work comprehends the whole medical art as understood in that day.

Yours truly,

M. Forster, M.D.

Palmerston, Ont.

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

## MEDDLESOME INSTRUMENTATION IN URETHRAL DISEASES.

BY W. L. CHAMPION, M.D., ATLANTA, GA.

The ugly train of symptoms that follow in the wake of bad urethral surgery, and the results obtained from such instrumentation, is frequently a monument as lasting to the surgeon as a fracture improperly treated. It seems the impression is prevalent in the minds of some that the urethra has no function at all, but was made for the surgeon's use, to demonstrate his skill in the uss of instruments.

Considering the teachings of to-day, and our knowledge of the importance of cleanliness in surgery, it is a puzzle to know why physicians continue to thrust dirty instruments, made sleek with rancid grease, into the urethra and bladder, producing untoward results and not knowing the source of infection. If the instruments are clean, it frequently happens that they are passed into the bladder, carrying purulent material retained within the urethra. While a diseased urethra is, as a rule, an unclean canal, it frequently happens that the deep urethra and bladder are in a healthy state, so there is no common sense in "adding fuel to the fire" by using unclean instruments or forcing poisonous material into uninfected areas.

The close observer rarely overlooks the origin of urethral fever, swelled testicle, cystitis, prostatitis, damaged kidneys, and many serious conditions directly due to the meddlesome use of instruments. Not to be a meddler in the treatment of genito-urinary diseases, it is essential to be familiar with the use of instruments, to know when to use them, and what kind of instruments to use.

The use of small steel instruments below 18 or 20 French cannot be too strongly condemned. With our knowledge of the anatomy of the urethra, and of the dangers of passing small steel instruments, false passages should be a thing of the past. The soft bougies, though not as durable as the steel sounds, accomplish the same results, and should always be used when a small instrument is called for; and even the larger ones are just as serviceable and produce less pain on introduction.

The routine practice of passing sounds *into the bladder* in treating strictures in the penile portion of the urethra is not only useless but bad surgery. There is always a liability of infecting the bladder, and producing irritation of the prostatic urethra. The short, straight sound passed through the stricture accomplishes the same result as the curved instrument, and the danger of producing complications is lessened.

An important point that should never be overlooked is the necessity of having instruments perfectly clean that are to be introduced into the bladders of old men with enlarged prostate; and this point should always be impressed upon the patient when he is given a catheter to use.

The carelessness with which instruments are thrust into the urethra frequently results in permanent injury to the tissues. "It is a very easy thing to force a catheter or sound through the urethral walls, or to produce sufficient injury, by bruising and laceration, to result in cicatricial deposit and consequent stricture." This is especially true when the canal is highly inflamed; and probably many of you have had cases of cystitis and later organic stricture to treat due to meddlesome surgery of this kind.

The custom of many physicians of using the steel sound for exploring the urethra to determine whether stricture is present or not should be abandoned. The sound is practically worthless as an instrument to arrive at any knowledge as to the condition of the urethra. Patients frequently present themselves for treatment who have been examined with sounds and told there were no strictures present, when a proper examination would reveal a badly strictured canal. A stricture that can be detected by a 25 bulbous bougie will frequently admit a thirty sound, and for this reason errors in diagnosis are made.

To meet with success in the treatment of urethral diseases it is necessary to make a careful examination. Neglect in this particular is why many failures are recorded. Patients with contracted meatus that will admit only a 26 or 28 bulbous bougie (urethrameter not being used) are told that they have no stricture, when it is impossible to determine whether the urethra is free of strictures until a bulbous bougie as large as the urethra is introduced.

The mistaken idea that every apparently gleety discharge from the urethra is an indication for the use of the sound is clearly shown in the discharge due to prostatic congestion, discharge from gonorrheal inflammation of the seminal vesicles, the discharge of long standing after epididymitis, the discharge we frequently see from syphilic mucous patches within the urethra, and other conditions that respond to proper treatment.

When a patient presents himself for treatment, if he has a highly sensitive urethra or discharge from the canal, first treat the urethra by irrigation until the sensitive condition has disappeared and discharge has been controlled, before making an examination or commencing treatment with instruments.

In treating stricture of the urethra by dilation how often should we pass an instrument? This question has been written upon, argued and discussed at length, and there seems to be a wide variance of opinion as

to the length of time that should elapse between the sittings. In the use of sounds for the treatment of stricture there can be no fixed law in regard to the intervals to be allowed between the sittings. Each case must be watched separately, and the results of the introduction of the instrument noted, so as to determine when to use the instrument again. My opinion is that the majority of men not studying the effects produced by an instrument passed through an organic stricture, influenced by the patient's desire for a rapid cure, are prone to pass instruments too often, thereby setting up an acute inflammatory condition and prolonging the treatment.

My experience in the treatment of urethral strictures coincides with that of Dr. Keyes, of New York. Probably most of you know his views on this question, but I will quote him at length so as to be plainly understood. He says: "Suppose a stricture which sensibly diminishes the size of the stream of urine, and is attended by gleet. Through this stricture a conical instrument is introduced, which is arrested for a moment, but gradually passes, stretching the stricture, and is distinctly 'grasped' as it is being withdrawn. What follows such an operation? At the next act of urination the stream is larger, and continues so during twenty-four hours. At the end of that time the stream is nearly as small as it was before the sound was used; the gleet is the same, or possibly increased. Now, for twenty-four to forty-eight hours the stream steadily becomes smaller, while the discharge grows more abundant and creamy. During the third or fourth day improvement commences; the stream again grows larger, the discharge becomes thinner and less copious, and this improvement often continues through the fifth and sixth or even seventh days, or longer, after which the volume of the stream commences to diminish and the discharge to become thicker. In such a case, if the same conical instrument first used had been reintroduced at the end of twenty-four hours it would have passed the stricture with about the same facility as on the day before; if after forty-eight hours, it would enter with more difficulty; if at the end of seventy-two hours, it would again enter as easily as on the first day; if reintroduction were first attempted on the fourth day, the sound would pass more easily than at first; if on the fifth, with more ease still, and it would not probably be so tightly 'grasped' on withdrawal; while in some cases the greatest ease of reintroduction is attained on the sixth, seventh, eighth day, or even later. This varies in different cases: but it may be stated, as a rule, that it is bad surgery, in treating stricture by dilatation, to reintroduce an instrument—unless it be filiform—before the lapse of at least seventy-two hours, and that more rapid progress will be made with the case by waiting till after ninety-six hours—often even until the sixth, seventh or eighth day."

If any one doubts the truthfulness of the above statement, all that is necessary to be convinced to the contrary is to watch the effect of an instrument under the same circumstances.

The cure of a stricture by dilatation is brought about by "absorption" of cicatricial tissue: so, if the structure is not stretched up to the full size of the urethra, the cure is not perfected, and recontraction will in all probability take place. This holds true in regard to strictures that have

been cut, and a large percentage of the urethrotomies that are not successful are due to neglected after-treatment. If a stricture can be cured by dilatation, the surgeon is not justifiable in subjecting the patient to a cutting operation, that might possibly prove fatal. Strictures of recent formation, situated in the pendulous portion of the urethra, can usually be cured by dilatation, and those in the deep urethra respond readily to this method.

Now, in regard to internal urethrotomy in the deep urethra, I know there are men who do this operation with but few accidents; but the best practice is to positively refuse to interfere unless the patient will submit to the external operation. The custom of doing internal urethrotomy in the office, and allowing the patient to go home in a hack or on a car, cannot be too strongly condemned. It is an operation that is fraught with danger, so we should guard against any mishap, and give the patient the best treatment possible. The operation should be done at home, and the patient kept in bed for at least five days, and it would be safer still to require a week's rest.

The mere cutting of a stricture will never cure it; it is absolutely necessary to keep the urethra dilated up to its full size until perfect healing takes place, and all cicatricial tissue has disappeared as far as the sound will accomplish.

Before a stricture is cut, the size of the urethra should be determined and the stricture cut to this size. Then introduce a bulbous bougie, and see if the slightest band of cicatricial tissue is left; if so, reintroduce the urethratome and cut all remaining bands. If the word meddlesome applies to any operator, it is the one who cuts a stricture to number 32 when the calibre of the urethra is 34, and never introduces a sound larger than the size the stricture was cut to. An operation of this kind cannot give relief; for in the future there will probably be a recontraction of the stricture. The same kind of operative work is done in cutting the meatus; it is either not cut to the full size of the urethra, or neglected and not kept dilated until healing takes place.

It is not my intention to appear dogmatic in regard to these apparently simple operations, bnt I so frequently see strictures that were improperly treated, and meatus that have to be incised a second time, that I cannot refrain from emphasizing these important points.

In my opinion, after internal urethrotomy instruments are frequently passed too often; every fourth, fifth or sixth day will give just as good results, and less pain to the patient, as when passed on the second and third. The nearer the stricture is to the meatus the shorter should be the intervals between the sittings.

The habit of passing sounds to cure a gleet, whether due to a stricture or not, is the cause of a twenty-five or twenty-six French, the largest the meatus will admit, to be thrust into the urethra to cure a chronic gonorrhea, when a mere incision of the meatus to its proper size, and local applications to the diseased surface, will perfect a cure.

It is bad practice to try and force an instrument through a stricture; it always results in damage to the urethra. If a stricture is of such small calibre that it seems impossible to pass an instrument at all, I feel

sure that in many cases, if a stream of water is thrown against the stricture with an irrigator for a few minutes, that an instrument can be passed into the bladder. Under similar circumstances, if a two or four per cent. solution of cocaine is deposited at the stricture, it will produce contraction of the engorged vessels and tissues to such a degree that a filiform, or even larger instrument, can be passed.

The deep injection syringe, an instrument that is in general use, and one no doubt that has served a good purpose, is inferior to the endoscope. With the syringe it is a matter of guesswork whether the solution is deposited at the seat of inflammation; but with the endoscope we can make a careful examination of the entire urethra, and limit the application to the diseased surface.

Every discharge from the urethra of long standing is not due to a stricture that requires cutting or dilatation. In many cases the discharge is due to a chronic inflammation that produces a slight thickening of the urethra, and is diagnosed and occasionally operated upon as a stricture of large calibre. Strictures of this kind, if they can be called strictures, are the ones that give such quick and happy results from direct applications through the endoscope.

The granular condition that remains after a stricture has been dilatated or cut to its full size, will respond more promptly to local applications through the endoscope than other means. While the sound and deep injection syringe was originally and is yet used for the relief of these conditions, it is impossible to know the condition the urethra is left in when the patient is dismissed.

I frequently have patients who, having had a gleety discharge from the urethra for years, and having been treated with sounds for stricture until completely disgusted with instruments, make a permanent cure of the granular condition by a dozen or fifteen applications through the endoscope. The endoscope I use, and think one of the best, is Otis' instrument, with electric attachment, and Klotz tubes. The ordinary urethral tubes, with a head mirror to reflect the light, will not give satisfaction.

It is necessary to the surgeon's success and the patient's welfare to ascertain the condition of the patient's kidneys before doing an operation upon the urethra. I remember very well a case where an external urethrotomy was absolutely necessary to relieve a tight stricture of the deep urethra that had caused a rupture, and the patient died from suppression of urine fifteen days after the operation, due to structural derangement of the kidney that was present before the operation. In urethral surgery preparatory treatment is very necessary. The bowels and kidneys should be in good working order, the urine should be rendered aseptic as far as possible, the parts to be operated upon should be thoroughly cleansed, and a dose of quinine before and after the operation is advisable. Taking these precautions will, I feel satisfied, reduce the mortality in surgical operations upon the urethra.

In closing, I would like to emphasize the importance of irrigation before surgical operations upon the urethral canal, whether it be only the passage of a sound or an internal urethrotomy. If this is done there will be fewer cases of urethral fever and less irritation and inflammation after

using instruments. Within the past twelve months I have used "hydrostatic irrigation" in the treatment of inflammatory conditions of the urethra and bladder, and it is far superior to any other method. The container, which holds a prescribed quantity of the solution to be used, at a temperature of 110° F., is placed eight or nine feet from the floor. A glass nozzle is used to throw the fluid into the urethra and bladder. The anterior urethra is first thoroughly washed out, and then the nozzle is pressed firmly against the meatus, and the patient told to breathe deeply or try to urinate, and the fluid flows back into the bladder. When the bladder is full the patient is allowed to pass it out, and the bladder is refilled. The value of this method is that the urethra is distended to its full capacity, which forces the pus and germs from the glands and follicles of the canal."

*Bibliography.*—G. Frank Lydston, M.D., "On Stricture of the Urethra." E. L. Keyes, M.D., "Genito-Urinary Diseases and Syphilis." Prince A Morrow, M.D., "A System of Genito-Urinary Diseases, Syphilology and Dermatology."—*Med. and Surg. Journal.*

## THE TREATMENT OF INJURIES OF THE BRAIN.

BY DAVID Y. WINSTON, M.D., CLARKSVILLE, TENN.

### LACERATION OF THE BRAIN.

The condition known as concussion is so hard to diagnose from laceration of the brain in the severer varieties—if such a thing be possible—that I give the treatment of both together. There is much doubt if the brain, soft and easily torn as it is, can withstand the violence necessary to cause the symptoms often called concussion.

*Treatment.*—In the milder cases scarcely anything is to be done further than to make the patient lie down a short time, with possibly a little cool water or cold compresses to the forehead. In severer cases put patient to bed, with cold cloths or cold coil to the head, milk diet for a day or two, keep bowels open, enjoin absolute quiet, and, if needed, give bromides or small doses of morphine for rest and sleep.

In severer cases attended with unconsciousness or other grave symptoms of cerebral trouble, no rash treatment is to be followed; but what can be less conservative than to let a patient lie for days without investigating the presence or not of fracture? The word "conservative," as usually used, means "fear of action." In grave cases, I believe, no one can be positive as to the existence or not of fracture, without an incision down to the bone.

In some instances it will be both necessary and justifiable, if grave symptoms exist. I have seen men in whose hands I would trust my life, who had failed to diagnose a depressed fracture through an unbroken scalp, simply because the swelling had obliterated all traces of depression. For this reason, I claim it is often best to make an incision down to the bone, and if no depression exists, you will know the ground you are treading; then wait, and, if cerebral symptoms develop, trephine, and do

what else the case may call for. I believe almost all cases of laceration with simple non-depressed fracture would be better off and more lives saved by operation. For with drainage, opening the dura, and washing off the laceration, or if the dura is torn, doing what may be necessary in the way of trimming the edges and suturing, inflammation would be less likely to occur, and after consequences less liable to be severe.

INTRA-CRANIAL HÆMORRHAGE.

The varieties of this form of traumatism are extra dural, sub-dural, cerebral and cerebeller, and from the sinuses. Extra-dural and sub-dural hæmorrhage are so much alike in symptoms that a diagnosis between them is impossible. However, with slight modifications in the technique, the treatment is the same. Extra-dural hæmorrhage is usually from one of the branches of the middle meningeal artery, or from its main trunk. There is one symptom of such importance that all treatment hinges upon its presence; viz., a period of consciousness after the injury, preceding the coma. The period of consciousness may be very brief, being, usually, directly in proportion to the size of the vessel ruptured. If very small, it may be hours or even days before the coma appears. The hæmorrhage may come from a wounded sinus, as in three cases I have seen. The diagnosis having been established, the treatment should be promptly undertaken. Paralysis may gradually lessen and consciousness return, but the results of waiting and not operating are often deplorable. Sub-dural hæmorrhage usually comes from the small vessels on the surface of the brain and from the middle cerebral artery in the fissure of Sylvius.

*Treatment.*—In treating extra-dural hæmorrhage, we must remember the vessels involved are usually the anterior or middle branches of the middle meningeal artery, at times its trunk. Sub-dural hæmorrhage is oftenest from a number of smaller vessels on the surface of the brain, and then usually is associated with a depressed fracture. It may, however, be from the middle cerebral artery running along in the fissure of Sylvius, or from some of the other large vessels on the suface of the brain. In operating for hæmorrhage, it must be our invariable rule to trephine as indicated by cerebral localization, not by the site of the external wound or injury. This, provided there are localizing symptoms. Of course, any fracture or other injury is to be treated on its own merits. It would be most reprehensible to operate only for depressed bone, with a clot of blood somewhere else.

In extra-dural hæmorrhage we can reach the main trunk and anterior branch of the middle meningeal artery on a level with the orbit, one and one-quarter inches behind the external angular process of the frontal bone. The middle branch is reached just below the parietal eminence on the same line. If the clot be from the middle cerebral, it can be reached by opening a little upward and backward from the point for the main trunk or anterior branch of the middle meningeal, or the opening for the latter can be enlarged upward and backward if we fail to find it there. The dura will, of course, have to be opened. The usual form of sub-dural hæmorrhage will only give the symptoms of the accompanying depressed

bone. If a dilated pupil points to gravitation of blood to the base, we will have to trephine lower. For instance, one-half to three-quarters of an inch below the main trunk of the middle meningeal.

### HÆMORRHAGE INTO THE CEREBRUM AND CEREBELLUM.

Violence may produce hæmorrhage into the brain substance from a rupture of some of its blood-vessels. It is indistinguishable from apoplexy in its symptoms. The diagnosis depends on its resemblance to apoplexy, and the following traumatism. The treatment may be most satisfactory if too much damage has not been done the brain by the blood current. Where there are distinct localizing symptoms, the blood-clot may be easily located and found. If found in any place, it must be cleaned out, the cavity washed, and, if very large, drained. If small, after thoroughly cleansing and hæmostasis, close the dura without drainage of the cavity. When great damage has been done the brain, death often occurs. The subsequent history of many cases which live will be most deplorable where the injury was extensive.

### HÆMORRHAGE FROM SINUSES.

Not so rarely as is supposed a depressed bone punctures or lacerates a sinus. The hæmorrhage is usually extra-dural. It may be sub-dural. The depressed bone usually prevents a rapid flow of blood, but when elevated or removed, allowing the blood to pour out, it often does so frightfully. Sinuses may be wounded in operations accidentally or intentionally. It may be necessary to ligate a sinus on each side, and remove the intervening portion in an operation. I have had three cases of wounds of the sinuses in depressed fractures. Two were of the superior longitudinal sinus, and one of the Torcula Herophili. All these were sutured and healed well. The torcula was packed around with iodoform gauze, in addition to suturing. These wounds may be simply packed, may be caught by forceps, or a lateral ligature may be applied if the wound is small.

### WOUNDS OF THE BRAIN.

These may occur from depressed bone, from bullets or other missiles, swords, bayonets, arrows, canes, umbrellas, pencils, etc. We have already considered those from depressed bone and gun-shot wounds. Those remaining to be considered are among the most dangerous wounds to which the brain is liable. The objects causing them are usually pointed and produce punctured wounds. They are much more likely than gun-shot wounds or wounds from bone to be infected. They may occur at any part of the brain, even through the nose, mouth or eye. They are always accompanied by fracture except when they occur through an open fontanelle, or rarely a large parietal foramen. They may take place through a previous trephine opening.

The first steps toward treatment is to remove any protruding foreign bodies, and by packing, if necessary, to control hæmorrhage. It may be necessary to leave the object in the brain until the operation, for fear of doing additional injury in its removal. Be careful never to use an object as a lever, or great injury may be done. It may be necessary to remove

bone before a cane, or pencil, etc., can be extracted. All vessels requiring it must be ligated, all pieces of loose bone removed, all depressed or pointed edges bitten away, and the wound washed out to its depth and disinfected. If the wound is completely or almost through the brain, it will be best possibly to make a counter opening and carry the drainage tube through from side to side. If the puncture takes place through the mouth, nose, or orbital cavity, the object must be examined for fear it has been broken off and a piece left in the brain. If so, it must be removed, the opening being enlarged sufficiently for this purpose and for drainage. Each case will present especial features for attention, but treatment based upon these principles will give satisfactory results.

Case.—Wound of brain, June, 1894. A white girl, two and one-half years old. A large farm-bell, on a post twenty feet high, fell, striking her head on the right side in front of the motor region. The bones were driven into the brain, by the handle I suppose, to the depth of one and one-half inches, making a large jagged wound in both the dura and brain. There was not much hæmorrhage. Considerable bloody brain-tissue came away when the wound was washed out. The ragged edges of the dura were trimmed smoothly, but could not quite be brought together. All depressed bone was elevated or cut away. A drainage tube was passed down to, but not into the wound of the brain. No fever and an uninterrupted recovery.

As illustrating the danger of a non-operative course of treatment after injuries of the bones of the cranium, or to the brain itself possibly, I append this case upon which I operated three years since:

J. T., white, son of a respected family, received a blow over left side of parietal region, felling him to the ground. He was not rendered unconscious, but got up and after sitting around for a time resumed his work, chopping down timber. The blow was from a limb breaking off and flying back, when one tree struck another in falling. In a few months he began to change mentally, becoming morose, sullen and suspicious. Within a year he was sent to an asylum for the insane. About two years later he was sent home to die. At this time my acquaintance with him began. Examination of the head revealed nothing abnormal, no scar or depression was visible on the shaven scalp; nothing could be felt. I determined on an exploratory incision down to the bone, that I might see the condition present, and, if necessary, then operate. When the bone was exposed, one place three inches in diameter was eburnated. The trephine would not cut it at all. I soon made an opening with a chisel, and bit the rest away with rongeur forceps. It was over double the thickness of the surrounding bone. There was no diploe, but an occasional bleeding point the size of a pin. The bone was thickened and had exerted considerable pressure upon the brain. Before the operation he was wildly maniacal. He had emaciated to a shadow. His age was about twenty-five years. I had to tie him hand and foot in bed for a few days. He then began to get better, to sleep well and eat. In six weeks he was up, well physically, and his mental condition much improved. He recognized old friends, but all the past insane spell was a blank. Since then he has been well physically, but in rather a melancholic condi-

tion mentally. Lately I hear he is much better mentally, enough so to call on the young ladies of the community. I do not believe he will ever be perfectly sane. I think there should have been more bone removed, and there would have been but for his condition being alarming upon the operating-table. However, all the thickened bone was removed. If this case had been cut down upon at the site of injury at the time it was received, a fracture slightly depressed would have been found. If operated upon then this would have prevented further trouble.

---

Extirpation of the Rectum by the Kraske Method.—Dr. Joseph Bacon says that when the cancer or stricture is limited to the anus and lower rectum it frequently happens that the diseased portion can be removed without opening the peritoneal cavity, and in such cases the danger of the operation is reduced to a minimum. Unfortunately cancer of the rectum, like stricture, usually begins at a point where the levator ani muscles encircle the rectum, and when the growth is removed the greater part of the levator ani muscles and the recto-vesical fascia, together with the peritoneal covering, is so extensively removed that resuturing of the peritoneum so as to close the peritoneal cavity is out of the question, and one must close the abdominal cavity by means of gauze packing in the pelvic outlet until after four or five days, when the peritoneal surface next the gauze will have thrown out a layer of lymph and granulation tissue, entirely closing off the peritoneal cavity from the external wound. It is important to remember that the bony incision must be limited above at the lower border of the third sacral vertebra, otherwise the third sacral nerve is injured and serious bladder complications are brought about by the paralysis of this nerve.—*Interstate Medical Journal.*

---

A Method of Washing in Eczema.—In view of the extensively-held modern opinion of the probable parasitic etiology of eczema, the necessity of cleanliness becomes an important factor in its treatment, while the long-known injurious influence of water on eczematous surfaces raises a difficulty in carrying this idea into effect. The use of olive oil—which, as a substitute for water for cleansing the skin and, indeed, in also removing the grime of manufacturing trades, is commonly known—is strongly advocated for this purpose. Recent experience with this method of cleansing has impressed the writer with its adaptability for constant use and its value when persevered in. A case in point is cited in which the disease was obstinate and tending to spread under the use of water for washing. When cleansing with the oil was adopted the disorder rapidly subsided. The method consists in smearing the parts well with a pledget of cotton-wool saturated with olive oil. The oil is then removed by gently rubbing the surface with a corner of a dry, soft towel covered with toilet oatmeal. In pustular eczema the writer fonnd the occasional use of soap and water also necessary.—*Brit. Med. Jour.*

# MEDICINE.

IN CHARGE OF

N. A. POWELL, M.D.,

Professor of Medical Jurisprudence and Lecturer on Clinical Surgery, Trinity Medical College; Surgeon to the Hospital for Sick Children, and to the Extern Department Toronto General Hospital; Professor of Surgery, Ontario Medical College for Women. 167 College St.; and

WILLIAM BRITTON, M.D., 17 Isabella Street.

## SYPHILIS OF THE THORACIC ORGANS.

BY HENRY ALFRED ROBBINS, M.D., WASHINGTON, D.C.

Lammonier nearly a century ago described the existence of phthisis pulmonalis of a syphilitic character. Then followed a long series of years when syphilis was not recognized as attacking the internal organs, probably owing to the teachings of John Hunter and Sir Astley Cooper, who did not believe in any visceral complications of syphilis. Sir Astley and Edward Jenner were the pet students of Hunter, and naturally endorsed whatever the great physiologist taught. Sir Astley in his lectures on surgery taught "that some parts of the body are incapable of being acted upon by the venereal poison, such as the brain, the heart and the abdominal viscera." Indeed, he writes: "This poison does not appear to be capable of exercising its destructive influence on the vital organs, or on those parts most essential to the welfare and continuance of life."

In 1826 Laennec and Vandral recognized and described syphilis of the lungs, identical in its symptoms which those of phthisis pulmonalis. Van der Kolk insisted that syphilitic subjects died, presenting "phthisical appearances, with ulceration of the lungs, situated most frequently in the middle lobe, but without tubercle." Ricord, Lanceraux and Alfred Fournier have, by pathological anatomy, proved that symptoms of phthisis are not only possible, but very frequently the same as those produced by syphilis. (We are not fully in accord with this last statement.—ED.)

*Syphilitic Broncho-Pneumonia.*—Drs. Balzar and Grandhomme have recently made several necropsies of syphilitic still-born infants, and the results of their examinations prove that syphilitic lesions, which are caused by microbes, like other inflammations, do not appear to preserve any specific character in their evolutions. With regard to the lungs, syphilitic pneumonia may be classed with broncho-pneumonia, in the same degree as secondary pneumonia in acute infectious diseases, such as measles, or in chronic affections, like tuberculosis. Syphilis in the fetus assumes the different forms of broncho-pneumonia and other lesions, according to its violence and the degree of its chronic stage.

At a meeting of the Moscow Dermatological Society, Pospelow and Kontrim (*Monatshefte für praktische Dermatologie*, 1895) each reported two cases of syphilitic pneumonia that yielded to treatment with mer-

curials. Hemoptysis occurred in three of the cases, and fever with sweating was present in two. The lesion was localized at the apices. In one of the cases, tubercle bacilli were found in the sputum, and the process was believed to be tuberculous. Treatment with mercurial inunctions and sulphur baths, with a residence in Egypt, was followed by general improvement and disappearance of fever, cough and expectoration. The patient had been well for three years at the time of the report. In this case it is believed that tuberculous affection was implanted upon the syphilitic pneumonia, disappearing with the latter.

*Syphilitic Pleurisy.*—In the *Presse Médicale*, of the 20th ultimo, M. Chantemesse publishes a clinical lecture on the complications of constitutional syphilis. The subjects of the lecture were two men who presented the usual stigmata of syphilis in the eruptive stage. In both there were discovered the physical signs of pleurisy with effusion, and in one aspiration with a hypodermic syringe yielded a quantity of straw-colored serum. Both had râles, due probably to an eruption of roseola on the bronchial mucous membrane. M. Chantemesse had succeeded in collecting twelve similar observations of syphilitic pleurisy. Most of them were cases of dry pleurisy, but in either case the prognosis is favorable, resolution and absorption being the rule under specific treatment. M. Chantemesse treated his patients with intravenous injections of corrosive sublimate; he, nevertheless, does not recommend this method, but would prefer intramuscular injections of red oxide of mercury dissolved in sterilized olive oil. He says that he has never noticed any stomatitis during a treatment of several months, consisting of daily doses of four or eight milligrammes of the salt dissolved in one or two cubic centimetres of the oil. The specific character of the pleurisy is plain to M. Chantemesse from the following peculiarities: Its bilaterality, the small amount of effusion, its concomitance with the secondary eruption, its complete disappearance without leaving any traces, and its prompt cure by mercury. The lecturer is inclined to believe that the so-called secondary fever of syphilis may be in many instances explained by the existence of this kind of pleurisy, which in the presence of indubitable signs of lues venerea is not suspected or sought for. In one-half of the cases bronchitis is present as well, this complication being probably due to the outbreak of a syphilide on the bronchial mucous membrane.

Dr. Rendu, at a recent clinical lecture, presented an old woman who had for a long time been emaciated and cachectic, but without fever. The symptoms were ill-defined, some pain, stiffness of the limbs, without marked weakness or paresthesia, dyspnoea on exertion, and for a short time a dry cough without expectoration. The respiratory and auscultatory phenomena were found normal, anteriorly, but behind there was dullness over the right apex, with roughened prolonged expiration. There was a loud, rough, systolic murmur, together with a softer and more superficial one, but no symptom of cardiac insufficiency. The arteries were apparently healthy, the liver normal in size, and there was no albuminuria. There was a diffuse and characteristic syphilitic melanodermia, and iritis of two years' standing, nocturnal bone pains and headache. Her only previous illness had been measles. It was pointed out

that against tuberculosis was the long duration, the absence of expectoration, of râles, and of concomitant symptoms. Syphilis does not usually attack the apices, although cases of this occurrence are recorded. Syphilis and tuberculosis may occur in association, and tuberculosis may attack a lung previously syphilitic. From the absence of a history of acute pneumonia, an indurating pneumonia could here be excluded. The attack of measles was not considered adequate cause. As there were no other etiological factors, the changes in the heart and lungs were probably syphilitic. Great improvement followed the exhibition of mercury and iodide of potassium.

In lecture No. VIII. I referred to patients of Abrahams Brambilla Fournier and Ross. These patients were undoubtedly far advanced in pulmonary tuberculosis, when they acquired syphilis. They were put upon energetic anti-syphilitic treatment, which cured not only the syphilis, but the tuberculosis. (Doubtful, ED.) You will naturally ask if I do not think that the treatment destroyed the toxines of both syphilis and tuberculosis, and the same treatment is indicated for both diseases. I have put this same question to eminent throat and lung specialists, and have been informed that the treatment has been tried, and the effects were baneful, unless the patient had syphilis complicating the tuberculosis.

*Syphilis of the Heart and Arteries.*—Virchow describes syphilitic growths in the substance of the heart, and refers to those recorded by Ricord and Lebert. Ricord, in his Atlas, calls them "syphilitic muscular nodes in the substance of the heart." They were found in the substance of the ventricles, and consisted of firm, cheese-like masses. There was a history of chancres and ulcerated tubercles of the skin. Lebert reports that gummata were seen at a comparatively early stage of development in his case, and were found in the wall of the right ventricle. There were tubercles of the skin, of the subcutaneous tissue, genital organs and bones of the skull. In Virchow's case there were syphilitic gummata in the testicles.

In the Museum of the British Army Medical Department, at Netley, there are two preparations which show such gummata in the substance of the heart. "One occurred in the case of a soldier, twenty-four years of age, under treatment for venereal ulcers, of nine months duration, in various parts of the body. He had lost his palate, and eventually sank from exhaustion, with symptoms of phthisis. Sections of the muscular substance of the heart showed several isolated deposits in its substance and beneath its serous covering, and isolated portions of the lungs were converted into a substance of the consistence of cheese."

A few months ago, I visited the United States Army Medical Museum, and Dr. D. S Lamb showed me a pathological specimen of a heart in which a syphilitic gumma was imbedded in the wall of the left ventricle. This specimen was exhibited in Baltimore, at the Johns Hopkins University, and its nature verified by the pathologists there. For the clinical record, Dr. Lamb referred me to Health Officer W. C. Woodward, M.D., as the specimen was obtained from him when he was serving as coroner of the District. Dr. Woodward kindly sent me the following report: "The patient came under my observation after death. The history was

vague. Colored, male, thirty-three years old, a native of Virginia; was found dying in bed about five o'clock one morning by his wife, who had been sleeping by his side. He had complained for some time of shortness of breath, and is said to have had night-sweats just previous to his death. There was, further, a history of continued ill health, not borne out by the condition of the body, attributed by his family to a hernia. There was no external evidence and no history of syphilis. Deceased was a huckster by occupation."

At a recent meeting of the Clinical Society of London (*British Medical Journal*), Dr. Duckworth reported the case of a strongly-built man, 35 years old, who, while walking in the street carrying his little boy, suddenly fell down and expired. Only a meagre antecedent history was obtained, but there was evidence of old syphilitic disease on the tongue and on the glans penis. A small gumma was found in the left lung. The heart weighed twenty-two ounces, and was bound by firm adhesions to the pericardium, both at the apex and the base. The ventricles were hypertrophied and dilated; the valves were normal. In the wall of the left ventricle, above the apex, was a round depression, nearly an inch in diameter, and covered by long adhesions. This was due to a thinning of the wall, with much endocardial thickening. A large aneurismal pouch was found behind the posterior cusp of the mitral valve. This appeared from without as a tumor growing from the base of the heart, and completely covering the left auricle. Its walls were half an inch thick, and the pericardium was closely adherent over it. On section the muscle was replaced by tough, fibrous tissue, with foci of gelatinous matter. The endocardium was greatly thickened and fibrous. Microscopic examination proved the formation to be gummatous in nature, with patches of caseation. The smaller vessels showed signs of endarteritis. These appearances were taken to indicate a recent gummatous growth at the base of the left ventricle, and a similar but older one near the apex of that cavity.

Investigation showed that in fourteen similar cases, death occurred quite suddenly in eight. But one case in the whole number was in a woman. The mean age of all the patients was 32 years. Many of the cases seemed to have been devoid of urgent symptoms. In some there had been pericardial pain. The valves were not usually involved, and hence murmurs were not to be heard. The ventricle and their septa were the common sites of the growth. The tendency to fatal and sudden syncope was probably attributable in part to endarteritis affecting the coronary vessels, and possibly to the formation of embolisms in the branches of the coronary arteries, as a result of the dislodgment of fragments from the interior of aneurisms.

During a recent meeting of the Montreal Medico-Chirurgical Society, Dr. Finley presented the report of a case of syphilitic gummata of the heart and liver, and exhibited the pathological specimens showing the characteristic lesions.

At a late meeting of the Charité Aerzte of Berlin, Dr. Israel exhibited pathological specimens, and gave the following clinical history: During life the patient, aged 47, had presented the appearance of hepatic cirrho-

sis. The pulse, 136, was small and irregular at first, but improved under digitalis. A systolic murmur was heard in the left, second and third intercostal spaces, with an accentuated second sound. There was no clinical evidence of syphilis. Eight days after admission there was a profuse and fatal hemorrhage from the stomach. The autopsy showed the heart to be hypertrophied, but only slightly dilated. No circulatory obstruction could be proved at the mitral orifice. Islets of fibrous tissue were present at the base of the papillary muscles, and the muscles themselves had undergone fibrous changes. Fine strands of fibrous tissue were seen in the slightly brown cardiac muscular tissue. The dilated left auricle presented peculiar appearances. The wall was rigid, with only the remains of a few yellowish-brown muscular fibers. The auricular appendix was greatly shrunken. Very irregular and easily detached excrescences were found in the inner wall of the auricle, and were especially marked well on the upper surface of the mitral valve segment. The gummatous formation in the heart muscle could only be due to syphilis. In the liver fibrous changes with the remains of gummata were found. There was induration of the uterus with chronic endometritis, also of syphilitic origin.

At the Berlin Medical Society, Dr. A. Fraenkel recently demonstrated a specimen of cardiac syphilis from a woman 36 years of age. When first seen last year she had aortic regurgitation and suffered from frequent headaches, which were occasionally associated with fainting attacks. The heart disease was supposed to be consequent on acute rheumatism. The husband was syphilitic and the woman herself had suffered from swellings on the head, which had ulcerated and left scars. She improved at first and left the hospital, but was readmitted this year with severe attacks of angina pectoris, in one of which she died. At the necropsy the left coronary artery was found quite permeable, but the orifice of the right coronary was completely obliterated by a process of arterio-sclerosis, which, in excess of the patient's years and its proper position could only be determined backwards along the lumen of the artery. There was a gummatous tumor, four and a half centimeters long, in the septum ventriculorum, and Fraenkel thinks this shows that the arterial changes were really of syphilitic nature. The arterio-sclerotic changes in the aorta reached down to the bifurcation. Fraenkel, moreover, remarks on the part played by syphilis in the etiology of aneurisms. Walsh thought that sixty per cent of true aneurisms were due to syphilis; others think still more. Fraenkel himself, during the last four years, has seen nineteen cases of aneurism of the thoracic aorta in which there were necropsies. Three cases were in women, sixteen in men. Of the nineteen patients, nine, that is, forty-seven per cent., had had syphilis, and these were all under fifty years of age. The case illustrates the relation of precocious arterio-sclerosis and syphilis. Mracek (*Medico-Chirurgisches Centralblatt*, 1895) refers to authors and states that, especially just preceding the roseola, in the second stage of syphilis, disturbance of the heart's action is not uncommon. He quotes Fournier to the effect that these troubles are functional and not dependent upon distinct lesions of the heart itself, and that they are distinctly transitory by nature, disap-

pearing without leaving a trace, occurring much more frequently in women, and commonly associated with nervous disturbances. The latter forms of heart syphilis appear, however, as distinct pathological changes. The symptoms of the affection are those of degeneration of the heart-muscle or interference with the valves, whatever is the cause of these pathological conditions.

Semnola holds as pathognomonic a persistent arhythmia, either existing alone or accompanied by tachycardia, respiratory troubles coming and going, resistance to all ordinary methods of treatment, and a history of syphilis. Through syphilitic stenosis of the coronary artery the symptoms of angina pectoris may be caused. Exceptionally, murmurs are developed. The course of syphilis of the heart is extremely slow and insidious. There is rarely any acute process, such as a softening of the gumma, but rather a slow transformation in the fibrous tissue. Judging from reported cases the prognosis is extremely bad, death coming suddenly and often in the midst of apparent perfect health. In sixty-three cases collected by the author (Semnola), this suddenly occurred in one-third of the number. Julien and Mauriac stated that this end is observed in fifty per cent. of cases. Death comes after a heavy meal, or from drinking or straining. Often the patients are found dead in bed. Many cases perish in coma from heart failure.

Dr. Fisher, in the *Medico-Chirurgical Journal*, summarizes as follows the articles of Hektoen (*Journal of Pathology and Bacteriology*) and Jacquinet (*Gazette de Hôpitaux*, 1895): "Hektoen records a case of interstitial myocarditis due to syphilis in a child six weeks old, and mentions that only eleven other cases have been recorded. In two of these eleven cases sudden death occurred when the children were considered to be in good health, a noteworthy fact, since it shows that this disease in the child may lead to the same abrupt arrest of heart action that frequently occurs in the adult when the heart is affected with syphilis.

"Jacquinet treats the subject of syphilis of the heart very fully. In connection with the above remark it may be mentioned that he quotes Mracek as saying that of fifty-eight cases of syphilis of the heart, twenty-one ended in sudden death. Others terminated in what French writers call acute asystole, where severe dyspnea ushers in the rapidly approaching end. Jacquinet quotes as an example the case of a prostitute who was dining in a beer-house with some of her companions, when she complained of pain in the stomach and abdomen. The pains increased, and palpitation of the heart was added. She was removed to a hospital and died of "advanced asphyxia" after a few hours. The pain mentioned in this case suggests angina pectoris, which may sometimes be epigastric in situation. Jacquinet comments upon this point and refers to the possibility of cardiac pain being a symptom of syphilis of the heart. He mentions that one of the recorded cases of sudden death occurred in a sailor, who died putting his hand to his heart as if he suffered pain in that region. Hutchard is quoted as saying that of 110 cases of angina pectoris, in 32 a history of syphilis was obtained, and other observers are mentioned as having noticed severe cardiac pain in syphilitic subjects. This point is of some interest, since potassium iodide is recognized as of

value in angina pectoris. The drug is not generally given, however, with the idea of combating syphilis, but of influencing the diseased condition of the coronary arteries that often exists. Yet a satisfactory result naturally suggests that this disease of the coronary arteries may be sometimes syphilitic, like aortitis of the intra-pericardial portion of the aorta, with which cardiac pain is also often associated."

Dr. H. P. Loomis has reported fifteen cases of fibroid disease of the heart, three of which were considered beyond all doubt to have been of syphilitic origin. He has also seen four cases of gummata of the heart wall. Sudden death occurred in two of these cases. Notes are given of one. An apparently healthy man, aged 35, was found lying dead on his bedroom floor, with his hat in his hand, having obviously fallen immediately after entry. The two cases that did not terminate suddenly were in young prostitutes. One of these died with intense dyspnea and cyanosis; the other was admitted to the Bellevue Hospital for lobar pneumonia, which ended fatally. Dr. Loomis emphasizes the point that the question of syphilis as a probable cause of heart disease should not be overlooked. He says: "When symptoms of cardiac failure occur during the prime of life, for which no cause can be ascertained, such as rheumatic history, valvular disease, arterial changes or kidney complications, especially in one with a syphilitic history, these should always suggest syphilis as the cause of the condition."

## THE JUDICIAL MIND IN MEDICINE.

BY JAS. McMUNN, L.R.C.P. LOND. & I.

Having heard the evidence of the various witnesses in respect to the present state of medicine, we must acknowledge its character appertains to the chaotic. The *savants* of this enlightened age may well blandly smile at Galenic simplicity on account of the electuaries of viper's flesh, which once held their ground; at Hippocrates, who taught with the earnestness of his heart that the function of the right testis was to furnish males, and the left, females, at the physicians of the "erudite" age, who gave pomegranate seeds for toothache because these seeds resembled teeth; nay, even at the illustrious Paracelsus who prescribed the moss growing on the head of a thief. And what was it which distinguished our forefathers' views? Surely their cock-sureness of their truth. Yet, will not the followers of the 19th century doctors have some reason to develop their zygomatici? Will that bright pioneer be crowned a hero, or dubbed a simpleton, who first searched in Tyrol mines for reptilian deposits for ulcerated wombs or thought of the ground-down livers of cocks and hens for emesis? On what pedestal will he rest who rehabilitated organotherapy? Who first gave Fallopian or prostatic extracts? or went to the dogs for serum? The pomegranate seeds offered the bait of suggestion, and I submit that suggestion, and its parent bias, even now, lead the faculty into innumerable errors. Yet surely the ancients were not so simply in contrast with ourselves as some would think. In Galen's

time every disease was thought to be due to relaxation or constriction. Afterwards to acidity or alkalinity of humours or to fermentations. Again to obstruction of pores or minute vessels. Again to diminished vitality or excess of irritation. I would ask you, can you improve much on these theories now? Most of your treatment is virtually tonic or sedative. Is not pain itself tension? Were not intubation and nephrotomy done at the time of Hippocrates? Did not Praxagoras advise laparotomy and enterectomy? Heliodorus do internal urethrotomy? Are bacilli, micrococci or wandering spirilla very modern acquaintances? By no means; they were known in 1683.

The most beneficent aids you now possess were ridiculed a short time ago. Among what throes did vaccination, the story of the circulation, anæsthesia, and other great advances become established? Of the discoverers of anæsthesia, that greatest gift ever bestowed by science, it may be said, those who deserved crowns were allowed to die the death of suicide, or live in bankruptcy of heart and pocket. Yet, in your fetich worship, you place laurel wreaths on more ignoble brows, and martyr, even now, the prophets who are too honest to be orthodox. The stethoscope, the microscope, the laryngoscope were but yesterday mere scientific toys. Before 1866 you did not know what fever heat was. Medicine is in its baby clothes, and the child is being reared badly.

Myopia has already developed.

"What is truth?" was the most pertinent question ever asked. Truth is the rarest of gems in the motley mines of so-called knowledge You have to search for one little truth, and are lucky if you find it, all through a life-time. Huge piles of knowledge are built, but there is no one to focus or analyse it for practical use. How long would it take you to localise a cerebral tumour from a study of the 447 papers written on brain sulci and gyri.

The life of most medical and physiological facts seems to be some half-dozen years. Idiopathic peritonitis, a few years ago a very common disease, is now a myth; so is the "fact" that an acute angle formed by the neck of the senile femur with the shaft conduces to fracture, and a hundred other things. "Opportunity and experience are fleeting," said Hippocrates, and what permanent new stones have the very best of us placed as the edifice of knowledge? Work a lifetime unenlightened by the past, and you will scarce discover that your toe nails grow; and, said Abercrombie, "He who has confidence in his own experience as a test of probability characterises a mind confined in its view, and limited in its acquirements." The physiology of the cell alone is too much for one life. Just think; the hand which dexterously removes a calculus belongs not to you, but to some dead Liston; the ear which distinguishes intra-thoracic sounds to some dead Cullen. The dead reign. The observations which gave you mercury cost centuries, and yet you are uncertain about it, and yet, also, at the word of every enterprising chemist you swear by every swindling drug. Some of your eminent men would swear that syphilis is as innocent as a common cold.

All things considered, the medical mind ought to be full of precedent and current knowledge, for, as Sir W. Gull fitly used to say, "ignorance

is the cruellest thing in life." Yet, as Celsus said, "Doctors are made by experience, not by reasoning," "a grain of fact is worth a pound of reason," and they would do well to remember that the senses are, as Aristotle pointed out, the only avenues to the mind. Of personal acquisition, enriched by the heirship of the mighty past and the teaching of the present, avoiding ruts, yet, perhaps, as man is an image worshipper, setting up on it some living model of excellency; eager to essay and focus knowledge, avoiding extremes or precipices. This should be the medical mind.

---

Dr. R. G. Curtin, of Philadelphia, in a statistical study of 60 cases of hæmorrhagic typhoid fever concludes that the following conditions indicate a fatal termination:

1. A tympanitic condition of the abdomen with a continual discharge of black clotted blood. The blood-vessels may sometimes be kept patulous by the distended condition of the intestines.
2. Associated renal trouble, which alters the blood in some cases, rendering it less coagulable.
3. Marked organic heart disease. The blood being impoverished and lessened in quantity is propelled slowly and the tissues are consequently imperfectly supplied with blood. Under these conditions a hemorrhage from the bowel becomes the "last straw that breaks the camel's back."
4. Cases of hemophilia. The blood is so altered that there is little likelihood of its being staunched.

---

## SYPHILIS AND SEXUAL NEURASTHENIA: THEIR TREATMENT WITH THE GOLD SOLUTIONS.

BY HERMAN F. NORDEMAN, M.D.,

Adjunct-Professor Genito-Urinary Diseases at the New York Polyclinic, Surgeon to New York Surgical and Genito-Urinary Hospital, etc., etc.

Within the past six months my attention has been repeatedly called to the gold solutions (known as arsenauro and mercauro) as offering results in my special line of practice not heretofore obtained by treatment commonly in vogue. I am sceptical in regard to special therapeutic agents, as a rule, such claims being made by the manufacturer as would tend to preclude confidence rather than to produce it.

Knowing the reputation of G. Frank Lydston, M.D., whose writings are so authentic and forcible, and being attracted by his paper read before the Chicago Academy of Medicine, in October, 1894, I determined to test these alteratives thoroughly in my service at the New York Polyclinic, and thus learn from personal observation whether results obtained would warrant me in suggesting their use to the number of practitioners who attend this institution. I must say that the income has been beyond all expectations.

The classes of cases that came under my observation were as follows: Chronic masturbators, those suffering from the results of incomplete coitus, or certain degenerates, the victims of psychical excitants leading to complete or partial impotence. These are the milder classes of cases so ably described by Kraft-Ebing in his classical work on psychopathia sexualis, and by Schrenk-Notzing in his Suggestive Therapeutics. These patients present themselves with the usual symptoms, i.e., profound anemia, neurasthenia, relaxed scrotum, etc., etc. In other words, they belong to the list of sexual neurasthenics. They feel the desire for copulation, but the act is unsatisfactory in that the moment the organ becomes erect ejaculation takes place, rendering the sexual congress incomplete and disgusting. In several cases I began the administration of arsenauro in five drop doses, increasing daily until the patient reached ten drops, three times daily, continuing this dose for at least eight weeks. It has been interesting to note the excellent general appearance of these individuals after about two weeks of treatment. They were full-blooded, hearty and buoyant, differing so markedly from their appearance when they presented themselves—an appearance so familiar, so unmistakable to medical men. I think, without doubt, that arsenauro is the most pronounced aphrodisiac I have ever seen, producing this effect in both sexes. Thus after noting the effect Iw as led to extend its use in my private practice.

The nervous debility so marked in the sexual neurasthenic is positively controlled by arsenauro. As for mercauro, I am in a position to attest its great value in cases requiring tonic mercurial treatment. I refer to those instances where, in the initial lesion, we give either the protiodide of mercury or inunctions of the ointment. Our patients often rebel at a continuation of this treatment. It is here that I put the patient on mercauro, beginning with five drop doses and increasing a drop a day until evidences of arsenical intolerance are established. Look for puffiness under the lids, which may appear when arriving at eight, ten, fifteen or twenty drops, three times daily, or the intolerance of the gold may be presented, i.e., frontal headache, a tendency to vertigo, and increased saliva. When any of these symptoms are present, decrease the dose until they disappear, then resume and persist in the treatment, say, for at least six weeks without omission. I find these patients, who are run down, as it were, under so-called tonic mercurial treatment, rapidly build up and show such an improvement that I continue them right along with mercauro, and apparently abort the later specific lesions—i.e., locomotor-ataxia, hemiplegia, etc. In mild forms of syphilis with little or no glandular involvement, and in mixed sores, I immediately resort to mercauro, and I have never seen its equal as a remedial agent in syphilis. It is pre-eminently a new therapeutic agent, the physiological effect being *sub judice*. In latent lesions it is positively the best remedy. By abundant experience I am settled in my conviction as to its value, and more particularly so when the iodides are not tolerated. We meet many cases thatpresent an idiosyncrasy, either with little or much of the iodide of potash. In these cases I give mercauro at once, and I am satisfied hat my colleagues will agree with me as to its value.

Squamous, ulcerative and tubercular syphilides, hyperplasia and chronic mucous ulcerations are the special indications for mercauro. In lesions of the skin, such as a tendency to eczema where syphilis co-exists, this is a most powerful antidote therapeutically. In chronic catarrhal cystitis, as the result of prostatic hyperplasia, arsenauro is a very valuable remedy. I have seen cases which have existed for years where the bladder would only contract sufficiently to expel a portion of the urine, leaving a residue to undergo ammoniacal decomposition, become absolutely well under the use of this combination. Seemingly it stimulates the viscus to contract, and I have noted the same result in the hypertrophied prostate of the aged, where atony of the bladder existed. It has been remarkable to note the vigor this solution gives to the organ. Of course, mercauro must be given preference where a history of specific disease exists or is suspected. I feel under obligations to those of my colleagues who attracted my attention to these products, and I hope that someone among my hearers at the Polyclinic will in time work out their physiological effect. They are certainly valuable curative agents and deserved careful trial. As illustrative, I mention an interesting case. Mr. R. J., aged thirty-two, widower, sent to me by Dr. L. to be examined for diabetes. He had at times, as the doctor informed me, shown traces of sugar in his urine. The patient was told by Dr. L. and other physicians in New York that his malady was diabetes—the result being that he came to me in a state of extreme mental perturbation, almost verging on nervous prostration.

Examination of urine revealed $\frac{1}{4}$ to $\frac{1}{2}$ of one per cent. of sugar, high specific gravity and hyperacidity. His family history was good, both parents alive, and brothers and sisters healthy. He complained of violent headache, loss of sleep, in fact, he was in a profoundly anemic condition, and suffered from neuralgias in his arm, shoulders and lower extremities. Examination revealed hyperesthesia of the skin, tenderness along the lumbar spine, and last, but not least, a well-marked specific macular eruption. Recently coitus was denied absolutely. Upon examining the throat mucous patches were discovered on the soft palate, and a well-defined chancrous sore on the right tonsil.

The cervical glands were markedly enlarged. I made the diagnosis of syphilis, as the case was clearly this, and the subsequent treatment proved it beyond any doubt.

The patient was placed on a full diet, allowed some claret, as he was sorely in need of a general tonic, and mercauro prescribed in ten drop doses three times daily, increasing one drop every other day until he was taking twenty drops three times daily, which was his physiological limit. His general condition began to improve in a very short time—sugar disappeared entirely, the eruption and sores improved, headache and nervousness left him, and he gained in flesh and strength. Here, then, was a typical case of the beginning secondary stage of syphilis benefited by mercauro, the case being one in which the use of other well-known mercurials could not have brought about such a result. I mention this case to show the good effect this mercurial tonic will produce, especially in syphilitic anemias.

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

## TRAUMATIC PARALYSIS OF THE UPPER EXTREMITIES.

BY JOHN F. ERDMAN, M.D.,

Attending Surgeon to St. Mark's and Gouverneur Hospitals, Professor of Practical Anatomy in Bellevue Hospital Medical College.

Considered from a medico-legal standpoint, these lesions are of sufficient importance to entitle them to more elaborate consideration than can be found in the text-books of the present day. The literature is sparse, possibly on account of these conditions having arisen less frequently before the modern operating-tables came into vogue, as a large number of the traumatic paralyses classed as postoperative or anæsthetic paralyses are due to the arms of the patients being allowed to fall on the sharp or narrow edge of these tables, and as a result pressure takes place and paralysis of certain muscles or groups of muscles follows.

In a recent article entitled "Anæsthesia Paralysis," Dr. H. J. Garrigues presents histories of fourteen cases, of which five occurred in his own practice. He also quotes Kron as stating that elevation of the arm backward and outward causes the median nerve to be stretched over the head of the humerus, and, as this is a position of the arms favored by some anæsthetists, it can readily be seen to form one of the causes of these conditions.

Büdinger, also quoted in the same article, states that a frequent cause of these paralyses is pressure, occurring between the clavicle and the anterior surface of the first rib, on the brachial plexus as it emerges between the scaleni in the neck. It would appear to the author that frequently in these anæsthetic cases, apart from the position of the arms and forearms, trouble is caused by the anæsthetizer in one or more of the following ways: In attempting to prevent the dropping of the inferior maxilla, the fingers, well abducted, are very often, particularly in beginners, placed very firmly along the neck, so as to give a strong brace for the index in supporting the angle of the jaw; by this means one or more of the fingers press upon the fifth, sixth and seventh cervical nerves (these being the most frequently involved), near the exit between the scaleni, and, as frequently is the case, the head is rotated to one side and the nerve or nerves are compressed between the fingers and the vertebræ. Again, as has often been observed by the writer, the anæsthetist will be

found leaning or bearing his weight upon the patient's arm or forearm, especially so when the patient's arms are drawn above the head, thus causing pressure of the nerves to take place between the humerus of the patient and the anæsthetist's arm, or between the humerus and the operating-table. Again, some of the assistants, in their over-assiduous endeavors to hold a patient down during the stage of excitement, produce the trauma either by firmly encircling the arm with the hand, and thus compressing the nerves, or by holding the arm down against the sharp or narrow edges of the table. The author has on several occasions seen one of these assistants throw his entire weight upon the upper extremity and chest, using the trunk of his body to hold down one arm, and, by reaching across the patient's chest, hold down the arm of the opposite side with his hands.

Recently a case of this class, *i.e.*, of postoperative paralysis, was referred to me with the following history :

*Case 1.*—Male, aged about thirty-six, bartender by occupation, had his forearm cut by the explosion of a siphon of seltzer on June 10, 1897. The injury was at the junction of the lower and middle thirds of his forearm, and cut the flexors of his little, ring, and middle fingers, possibly also that of the flexor carpi ulnaris. No attempt was made to unite the severed tendons, and the injury was healed in three weeks. The only impairment of function was in the fingers mentioned. The thumb and index finger were uninjured, as the patient stated that he used them constantly.

On July 19th he was operated upon with a view to uniting the severed tendons. An incision eight inches in length was made on the ulnar border of the forearm, and, as far as can be judged at the present time, with perfect success as far as union of the divided tendon is concerned.

September 5th he was referred to me ; an examination revealed a complete paralysis of all the muscles of the forearm. The only motion of the forearm retained was feeble supination, and that was demonstrated as being due to the action of the biceps.

The operator in the case was an able and careful surgeon, and the incision certainly could not have implicated any but the ulnar nerve. That this lesion could not have been an ascending neuritis entirely, is evident from the fact that the function of the thumb and index and of all extensors was perfect previous to the operation ; and that these functions were abolished shortly after the operation points to a pressure trauma of operative origin, possibly to the use of an Esmarch bandage for a bloodless operation, in addition to the table pressure by reason of the extension of the forearm and arm.

In addition to the postoperative or so-called anæsthetic paralyses, it happens frequently enough that the surgeon sees cases of paralysis following dislocations of the shoulder, especially when not reduced for some time ; cases of fracture of the humerus, in which the musculo-spiral is involved in the callus or in fibrous tissue, or by stretching of the nerve over an angular deformity ; contusions of the shoulder followed by deltoid paralysis due to the involvement of the circumflex, etc.; paralyses due to pressure in the axilla caused by the use of crutches or by tumors,

etc.; paralysis caused by sleeping with the head resting upon the arm or forearm; and, as in one case recently seen by the author, implication of the ulnar nerve in a marksman who used his elbow as a rest while shooting in the prone position at the Creedmoor rifle range.

*Case 2.*—Complete paralysis of the upper extremity following unreduced dislocated shoulder of three weeks' standing. D. S.——, about twenty-two years of age, sustained an injury to his left shoulder while bicycling at Liberty, N.Y. A diagnosis of dislocation of the shoulder was made and the ordinary treatment applied. Twenty-one days after the injury he was referred to me, and upon examination a subcoracoid displacement was found to exist, which apparently was rather firmly retained by adhesions. He complained of inability to use the arm, considerable pain in his elbow, and tingling with numbness of the fingers, particularly those supplied by the ulnar nerve. A complicating pressure neuritis was diagnosticated, and the possibilities of paralysis were told the patient. As will be seen, this was a wise precaution.

After the patient was anæsthetized in my office the shoulder was reduced with some difficulty. Within ten days after the reduction there was a total paralysis of the entire arm and forearm, with rapid atrophy particularly marked in the muscles of the hand. Electrical reaction was retained both to the faradic and galvanic currents, but was finally lost. The return of reaction to the galvanic current was manifested about twenty-one days after its loss, and within six weeks the return of contraction with the faradic was observed. The patient left my care about eight months after the injury was received, with an arm and forearm considerably smaller than those of the opposite side, but with restored function in all of the muscles.

*Case 3.*—Complete upper-arm paralysis from contusion. Mr. R.——, track inspector, was struck by the Empire Express and was thrown about twenty feet. He was referred to me two days later by Drs. Piatti and Thompson, of Greenwich, Conn. Upon examination he was found to have sustained a compound fracture of each of the bones of the right forearm near the wrist, and a single one of the ulna at its middle. Drs. Piatti and Thompson had made an excellent skiagraph, which showed the latter fracture very distinctly. In addition, the entire right shoulder and right half of his thorax were ecchymosed. The fractures were treated as usual in these cases, and complete repair was observed in the sixth week. It was noted at this time that the deltoid, which formerly was exceptionally well developed, had atrophied to a very small and useless mass of tissue, allowing the shoulder to drop so that it was mistaken for a dislocation. He was again referred to me, and in addition to the deltoid atrophy we found a complete paresis of the entire upper arm. A cure was obtained in about six months in this case.

*Case 4.*—Musculo-spiral paralysis following a fracture of the humerus. W. K.——, aged thirty-nine, driver, while attempting to check a runaway on September 2, 1896, was knocked down and sustained a fracture of his left humerus about the junction of the lower and middle thirds. He came under my care on November 23rd, with a history of paralysis of his lower-arm, muscles, etc.

## ASTHENOPIA AS A FORERUNNER OF NEURASTHENIA.

BY D. B. ST. JOHN ROOSA, M.D., LL.D.

It has long been known that the inability to use the eyes on near objects, without discomfort, is one of the early symptoms of locomotor ataxia. This form of asthenopia is easily recognized, if attention has once been turned to it. It depends upon irregularities in the action of the external muscles of the eye, and these in turn are dependent upon the general muscular weakness, which is one of the early symptoms of the disease. I desire carefully to distinguish what I am about to say from a discussion of the asthenopia, or, better said, the weakness of the external muscles of the eye, characteristic of grave disease of the spinal cord. I mean a well-defined asthenopia, entirely different from the paresis of locomotor ataxia—one that has all the subjective symptoms of true asthenopia, but which lacks one essential part of this condition.

The patients who are unable to use their eyes upon fine and near work, such as reading, writing, sewing, and the like, without ocular discomfort, are, in large proportion, found to have a positive error in the refraction, such as a considerable degree of hypermetropia or astigmatism, or both. On correction of this, the asthenopia is almost invariably relieved. But in the cases I am now classifying, there is no considerable error of refraction; none, at least, that of itself produces asthenopia. The greater part of the human race which is not myopic is hypermetropic. It cannot be said that a low degree of hypermetropia is, of itself, a sufficient cause of asthenopia. Just so with corneal astigmatism. Unless it reaches a diopter with the rule, or a quarter of a diopter against the rule, it does not, of itself, produce asthenopia. In addition to hypermetropia and astigmatism, presbyopia, with a considerable degree of astigmatism occurring in conjunction with it, is very often a source of true asthenopia in early middle life.

But there is a large class of people with asthenopia who consult an oculist who have, as to their refraction, a normal eye—at any rate, an eye which has no intrinsic conditions which may cause weak sight.

The cases of which I am about to write must not be confounded with those seen by every ophthalmic practitioner, in which, although there is need for glasses, and they are properly fitted, the patients are still not able to work, without asthenopia. In these instances, asthenopia occurs simply because the subjects of it are using their eyes beyond the capacity of the eyes themselves, or of their nervous or muscular system, or both. This is true asthenopia complicated with a neurotic or debilitated constitution. While writing this article I received a letter from a presbyopic patient, who has suffered from neurasthenia for some years, and who is adequately provided with glasses, but who cannot use her eyes as fully as she desires, in poring over volumes pertaining to a subject in which she is greatly interested, from morning till night, to the neglect of all proper open-air life. She asks for an eye wash that will enable her to do what she wishes to accomplish, or else she desires her glasses

changed. With such cases as these we are all perfectly familiar. I am writing of people who clearly do not need any glasses whatever, and who yet cannot use their eyes.

Given a normal refraction in the two eyes, there can be no such thing as want of muscular equilibrium, except in cases of paresis. The irregular action of the muscles in locomotor ataxia is not to be classified with the so-called "muscular insufficiencies." It is a weakness of all the muscles, and varies from day to day. It is a very different thing from the weakness of the interni seen in myopia, which is almost an invariable accompaniment of a high degree of that error of refraction.

When a patient comes to me having normal vision, a low degree of hypermetropia—that is to say, hypermetropia of from one to three diopters, and either no astigmatism at all, or half a diopter with the rule, I conclude that there must be something besides the eye which is at fault in the production of the asthenopia. Repeatedly I have found this condition of things to be the premonition of neurasthenia, or general nervous breakdown. To give such patients glasses is at the best to give them a placebo. The result of such a prescription is sometimes disastrous, since it veils the true condition and encourages them to continue to think of their eyes as the cause of all their troubles. We should be inflexible in our exact conformity to the principles laid down so clearly by the results of ophthalmoscopic and ophthalmometric investigation, and not prescribe glasses for those people in whose cases there are no scientific indications for their use. There is an idea prevalent in the mind of some general practitioners, and I fear also in that of some ophthalmologists, that there is virtue in a convex spherical glass of a low degree—in resting the eyes for distant vision, although the vision is perfect without it, and is at the best made a little less distinct with it. In my judgment no one is ever the better for glasses unless he or she sees better with them, or is much more comfortable with them. In the latter case, when the vision is not improved, there is usually facultative hypermetropia, or a low degree of astigmatism, and the patient will see as well at a distance with the glasses as without them. Even then, when the vision for the distance is perfect, I do not urge or advise such patients to wear glasses, except for the near. Careful observation on this point is of importance in the diagnosis, and in the conditions that I am writing about, for if an expert believes that glasses will be of service to a person when there are no positive indications in the eyeball itself for their use, he will often endeavor to do the impossible—that is, try to relieve a jaded nervous system by putting useless and troublesome lenses before the eyes.

In the early stages of neurasthenia the eyes are sometimes indexes of how much the general system is overworked. When the examinations result negatively, or we find that there is only myopia, which very seldom is the cause of true asthenopia—although it may be of inflammatory conditions—which prevent the eyes from being used with comfort, then we should very carefully abstain from ordering a glass, but endeavor, by the aid of a neurologist or general physician to find out what really is the trouble with such a patient. A careful search into the habits and environment of daily life will often determine this. I could multiply

the instances, chiefly occurring in young men and young women, for whom the whole gamut of glasses is run in vain by those who believe strongly in the curative value of convex, cylindric, and prismatic lenses for constitutional disease, even when no error of refraction exists, until the breakdown from neurasthenia, or, in the case of women, sometimes from uterine or ovarian disease, makes the matter plain to every one except to him who is possessed with the idea that the human economy revolves around the muscular action of the eye.

Malaria also produces asthenopia, and this fact, it seems to me, is also often overlooked. In New York City it is always necessary in obscure cases of asthenopia to secure a history as to the previous or present existence of malaria. I have cured many cases of asthenopia with Warburg's tincture. In view of the fact that various maladies are often erroneously ascribed to malaria, it may be well for me to say that I do not admit the diagnosis of malaria unless there is a positive history of intermittent or remittent malarial fever. In three recent cases in which the asthenopic symptoms were relieved by antimalarial treatment two were from notoriously infected places on Long Island and the other from Staten Island. In the latter case excavations for a building adjacent to the residence were the cause of the outbreak. I hold that if malarial fever has once occurred in a subject, subsequent diseases are either modified by the reappearance of the malarial parasite or uncomplicated malarial disease may again arise. I am thus particular on the subject, because the general exaggeration in regard to the frequency of malarial disease sometimes leads the medical observer to forget that it may crop out again if it has once actually existed.

The point I make in what I have been saying is that whenever in a case of asthenopia the refractive conditions do not clearly justify from an optical standpoint the prescription of a pair of glasses, they should not be advised, but a thorough investigation of the whole train of symptoms should be undertaken. An incidental advantage in such a course is that the expert in ophthalmology will demonstrate to the general profession that there are rules for the prescription of glasses, and show that we do not, like an optician with a customer, change from one to the other at every new ocular-symptom, or upon every whim of a nervous patient. The ophthalmologist who does this is forever floundering in a bog.

The ophthalmologist may find it interesting in this connection to recall the definitions of neurasthenia, as given by the standard writers. That of Dana seems to me especially clear and comprehensive: "Neurasthenia is a morbid condition of the nervous system of which the underlying characteristics are weakness and excessive irritability. . . . Neurasthenia," he continues, "occurs most often between the ages of eighteen and thirty." Every ophthalmic observer who will refresh his memory by turning to his case books for his unsatisfactory cases of asthenopia will, I think, find that a majority of them belongs between these years, and that some of them traced the first signs of their nervous breakdown to inability to use the eyes continually."—*Medical Record.*

# PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

H. B. ANDERSON, M.D., C.M.,
Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital. 241 Wellesley Street

H. C. PARSONS, M.D., 97 Bloor Street West.

## ON THE HÆMATOZOAN INFECTIONS OF BIRDS.

BY W. G. MACCALLUM, M.D.,

Bulletin, Johns Hopkins Hospital, Baltimore.

In the adult examples of the Halterdium of Labbé, which occurs abundantly in crows in Ontario, Opie in 1896-7 pointed out a distinction between two forms—a hyaline, non-staining form, and a form which is granular and takes on a comparatively dark stain with methylene blue—and suggested that the hyaline form alone might become flagellated. This distinction is readily confirmed, and it is a fact that only the hyaline forms become flagellated, the granular forms being extruded, and lying quiet as spheres beside the free nuclei of the red corpuscles which lately contained them.

Motile fusiform bodies, identical with the "Vermiculus" described by Danilewsky in his "Parasitologie comparée du Sang," in 1889, are seen after fifteen or twenty-five minutes to develop from these quiet spheres and wander away. By careful watching of the two adult forms on extrusion from the corpuscle, it is seen that the flagella from the flagellated forms, tearing themselves free, constitute themselves fertilizing agents or spermatozoa, and proceeding directly to the granular sphere, wriggle about it. One only of these gains admission, and plunges itself into the sphere, which after some agitation of the pigment becomes quiet for a period of fifteen or twenty-five minutes, after which it puts out a conical process, which grows and draws the protoplasm into itself, until we finally have the fusiform body with a small pigmented appendage and refractive, nucleus-like body such as was described by Danilewsky as a "Vermiculus." The origin of the vermiculus is in every case exactly the same.

In other words, we have a sexual process with a resulting motile form, occurring under unfavorable circumstances, and comparable with analogous processes observed in the lower plants and animals.

It is thought that a similar process may be expected in the case of the human malaria. The vermiculus moves actively and has great powers of penetration by means of its pointed anterior end, with which it breaks up the red corpuscles in its path, and it is thought that possibly it may penetrate the intestinal wall and escape as the resistant form which

gains the external world. This idea is supported by the finding of free organisms in the mucous contents of the intestine.

In the organs, the connective tissue skeleton is one great storehouse of pigment, the branching cells being often loaded with foreign material. The endothelial cells are also very generally pigmented, and there occur in some of the organs, as well as in their blood-vessels, large makrophages loaded with pigment and other debris. Many large phagocytic cells occur in various organs which engulf whole corpuscles with their contained organisms.

The organs found pigmented are, in the order of intensity of pigmentation, the spleen, liver, bone marrow, intestine, kidney, adrenals and thyroid. The leucocytes take but little part in phagocytosis in the organs, although phagocytosis goes on actively in a slide of blood.

During the last week I have examined the blood of a woman suffering from an infection with the aestivo-autumnal type of organism, in which a great number of crescents were to be seen These in a freshly made slide of blood, with very few exceptions, retained their crescentic shape for only a few minutes. They soon drew themselves up, thus straightening out the curve of the crescent while shortening themselves into the well-known ovoid form. After the lapse of ten to twelve minutes most of them were quite round and extra-corpuscular, the "bib" lying beside them as a delicate circle or "shadow" of the red corpuscle.

After twenty to twenty-five minutes certain ones of these spherical forms became flagellated; others, and especially those in which the pigment formed a definite ring and was not diffused throughout the organism, remained quiet and did not become flagellated. In a field where an example of each form could be watched, the flagella broke from the flagellated form and struggled about among the corpuscles, finally approaching the quiet spherical form; one of them entered, agitating the pigment greatly, sometimes spinning the ring about. The rest were refused admission, but swarmed about, beating their heads against the wall of the organism. This occurred over thirty-five to forty-five minutes.

After the entrance of the flagellum the organism again became quiet and rather swollen, but although in the two instances in which this process was traced the fertilized form was watched for a long time, no form analagous to the "vermiculus" was seen.

This is evidently for the human being what was foreshadowed by the organisms of the bird.

(In part an abstract of a paper read before the British Association for the Advancement of Science, August 24, 1897. Dr. MacCallum, we are pleased to state, is one of the numerous colony of Canadians whose original investigations in this great American seat of medical learning, have helped to gain for Johns Hopkins Hospital its present enviable position in the medical world.)

## REGENERATION OF NERVES.

Robert Kennedy, in a paper read befor the Royal Society on February 11th, 1897, reports four cases of secondary suture of nerves. In the first

the median and ulnar were sutured six months and a half after division in the middle of the forearm. There was total loss of sensation and motion in the distribution in the hand, and marked muscular atrophy. Three days after operation sensation commenced to return; by the nineteenth day touch was correctly localized on all parts of the fingers, and in a month sensation was almost perfect. Improvement in motion was slow and imperfect. In the second case suture of the median nerve was performed three months after complete division above the wrist. Sensation was lost in the median distribution, and apposition of the thumb was impossible. The thenar eminence was markedly atrophied. Two days after operation sensation began to return. Both sensation and motion speedily improved, and at the end of a year recovery was almost perfect. In the third case the median, musculo-spiral, and ulnar were involved in cicatrical tissue at the seat of fracture above the elbow. Two months after the accident there was total anæsthesia in their distribution and paralysis of the muscles. Sensation commenced to return on the fourth morning after operation; the case was followed only for six weeks, at the end of which time sensation was present in the fingers, but there was no return of motion. In the last patient the ulnar was sutured eighteen months after section, the sense of pain being totally lost in its distribution. Five days after this returned in the little finger, and in six weeks sensation was almost perfect, though motion had not improved. The author considers that early return of sensation must be regarded as indicating a restored conductivity of the divided nerve. The imperfect or non-return of motion must be taken to imply atrophy or destruction of the muscles. Microscopically he found that both central and peripheral portions of ununited nerves contained bundles of young nerve fibres, to the sides of which spindle-shaped nuclei were attached at frequent intervals. Where the nerve ends were united by a cicatricial segment without conductivity being restored the segment was found to consist of a dense network of connective tissue containing bundles of young nerve fibres in its meshes. Portions excised from the central ends of the nerves showed no trace of old myelin fibres or of degenerated fibres, but were made up of bundles of young nerve fibres, which could be seen taking origin within the old sheaths of Schwann. The author finds no evidence of Krause's ascending degeneration, the old axis cylinder and myelin sheath being destroyed in the peripheral segment in the ultimate portion of the central segment. Young nerve fibres are developed in the peripheral segment as well as in the end of the central segment, even while there is no connection between the two. These young nerve fibres arise within the old sheath of Schwann from the protoplasm and nucleus of the interannular segments. The spindle cells formed from the protoplasm and nuclei of the inter-annular segments elongate and unite to form protoplasmic threads with the elongated nuclei attached to their sides. The central portion of the protoplasmic thread develops into the axis cylinder, while myelin is deposited in drops in the outer portions, the protoplasm of which remains with the nucleus as the neuroblast of the new interannular segment. As long as the conductivity of the nerve is not re-established

the development of the fibres proceeds only to a certain stage, and as the new fibres three and eighteen months after division present the same characters this stage may be regarded as a resting stage, depending for its further development on re-establishment of function. The cicatricial intercalary segments of a spontaneously reunited nerve may be permeated from end to end by young fibres without re-establishment of function if the amount of cicatricial tissue present in the mass is sufficient by its pressure to prevent the passage of impulses.

## THE BACTERICIDAL ACTION OF THE BLOOD.

Loudon (*Archives Biol. de l'Institut. Imp. de Med. exp. à St. Petersbourg*, Tome v, No. 1, 1897) contributes a preliminary communication of his researches on this subject. A large number of experiments were made on the blood of rabbits and pigeons with the anthrax bacillus. From them he draws the following conclusions: Both from defibrinated arterial and venous blood of rabbits and pigeons, and from the serum and corpuscles of centrifugalised blood inoculated with anthrax, the number of colonies obtained in gelatine plate cultures shows a tendency to diminish fairly regularly up to a certain point. When this point is passed there is, on the contrary, a tendency to increase in the number of colonies obtained. This rise is often so rapid that after twenty-four hours the number of colonies cannot be counted. In some cases the initial diminution is so rapid that after 1½ to 7½ hours the plates proved sterile, and remained so till the close of the experiment 22 to 73 hours later. In others, after a diminution, the numbers rose again after 2½ to 8 hours. In a third class the plates made after 1 to 7 hours were sterile, but later colonies reappeared and multiplied. Thus the influence of blood media is not constant; some bacilli are killed, others are quite unaffected, while others seem paralyzed for a time, but under favorable conditions regain their activity. On an average the lowest number of colonies was reached with specimens taken 3 hours after inoculation of the blood. The mean of many experiments showed that at this time the diminution of numbers of the bacilli was from 93 to 100 per cent. The tables given seem to prove that the bactericidal substances are present in a constant quantity, and that the fewer the bacilli inoculated the more of these substances there is to act on each bacillus individually. Pigeon's blood is more bactericidal than rabbit's, which is probably the reason of their relatively greater natural immunity against anthrax. One of the tables given shows that under the same conditions the arterial blood of individual animals differs very slightly in bactericidal power. Taking the constituents of the blood, the serum is more bactericidal than the corpuscles, and possibly venous than arterial blood, though Fodor found the contrary. Finally, Loudon sums up the whole literature concerning the origin and constitution of the bactericidal substance. The special mechanism which communicates the bactericidal power to the blood is probably contained in the formed elements; by its aid substances are formed which are active, even in such an inert fluid as the serum. It is uncertain in what

condition these substances exist first in the formed elements, and afterwards in the serum. Either they have lost all the characters of active biological elements, or the latter are present at a certain stage of development only. The author found that broth made from cabbages and radishes, under conditions excluding the presence of active biological substances, acted on anthrax bacilli bactericidally in a manner exactly similar to blood. Hence it is simplest to suppose that the bactericidal substances are not active agents struggling with bacteria, but are inert matter, which, after being seized and assimilated by the bacteria themselves, then exerts its toxic power on them. Thus so-called bactericidal media contain both nutritive and, in relation to bacteria, toxic substances.

---

Many physicians of Canada are now presenting Abbey's Effervescent Salt, which has recently been introduced here.

Abbey's Effervescent Salt is a purely scientific chemical product, in the most approved form of effervescent granules, prepared by expert chemists. It is prepared to meet the requirements of the times, i.e., a more palatable form for the administration of nauseating drugs without interfering with their full medicinal effects.

An effervescent draught is recognized by the medical profession as one of the most agreeable and effective vehicles whereby to administer medicinal agents; especially as the carbonic acid gas, generated during its administration, is in itself a sedative, and is particularly soothing to a sensitive stomach.

One of its chief points is its superiority as an aperient, taking the place of nauseating mineral waters. It is particularly useful in cases of obstinate constipation, without being attended with debility of the stomach and bowels; not having the reactionary effect peculiar to most aperients and cathartics. It also directly excites the hepatic function, making it invaluable in chronic liver affections.

Its refrigerant qualities make it invaluable in fevers and many inflammatory affections.

It is especially useful in urinary troubles and as an antilithic in uric diathesis. It is particularly effective in the treatment of renal calculi, or kidney troubles generally. As an antacid it corrects the acidity of the stomach, making it a specific in certain forms of dyspepsia and in the treatment of gout and rheumatism. It also acts as a mild alterative, rendering the blood and urine alkaline.

One of the most important claims of Abbey's Effervescent Salt is its absolute purity. Its ingredients have been repeatedly analyzed by expert chemists, and have been pronounced fully up to the requirements of the test for pure drugs, as laid down in the latest edition of the British Pharmacopea.

After a careful trial we consider that this salt is absolutely the best effervescing salt made in any country. The fact that it effervesces up to the last drop is another of its excellent features.

# NOSE AND THROAT.

IN CHARGE OF

J. MURRAY McFARLANE, M.D.,

Laryngologist to St. Michael's Hospital. 32 Carlton Street.

D. J. GIBB WISHART, B.A., M.D.C.M., L.R.C.P.L.

Professor of Laryngology, etc., Ontario Medical College for Women; Lecturer in Laryngology and Rhinology, Trinity Medical College; Rhinologist and Laryngologist to the Hospital for Sick Children, St. Michael's Hospital, and the Girl's Home; Toronto General Hospital 47 Grosvenor Street.

## EARACHE.

The first indication in the early stage of an earache is to procure quiet, physical and mental. Place the patient at once in bed and keep him there, if a child, forty-eight hours at least. Many relapses occur from allowing a restless child to play about the house the next day after an earache. Let a hot foot-bath be given under the bed clothes for its relaxing and revulsive effect.

If a child from 3 to 8 years of age, give morphia sulphate, gr. $\frac{1}{8}$ to $\frac{1}{6}$, by the mouth. Let the dose be large enough to be effective and given hypodermatically in older patients. The result sought is not only relief of pain, but to affect the circulation, locally and in general. The opiate may be repeated, if the pain recur or be not controlled, but it should not be continued the second day. There are then surgical means to be used to relieve pain, and at the same time to relieve tension in the tympanum and lessen the danger of mastoid or brain complications.

If the bowels are loaded or the tongue indicates it, give calomel and a saline in robust cases. For two days let the patient have only light diet. See that no erupting or decayed or ulcerated teeth are exciting inflammation in the ear. Let the room be kept at about 68 degrees and the air sweet and somewhat humid.

The local treatment of the early stage of acute catarrhal otitis consists of measures to apply warmth to the parts and to prevent sudden alternations of temperature. Dry hot applications are preferable to moist ones. Let a large pad of wool or absorbent cotton be heated quite hot and applied over the entire affected side of the head, held in place by a kerchief. In young children the pad can be stitched inside a little cap and effectively held in place.

Occasionally, if the pain continue despite the treatment already suggested, combined heat and moisture give relief. This is best applied by a very gentle stream from a fountain syringe. A quart at least of very hot water should pass steadily and slowly into the auditory canal to the fundus and then escape into a receptacle held below the ear properly. If it relieves pain, it may be repeated as often as indicated.

Avoid the use of all applications about the auricle or within the auditory canal that may ferment or become rancid, such as sweet oil, oil and laudanum, and poultices of any kind. Instillations of laudanum, morphine solutions or cocaine solutions are of doubtful utility, and may be positively injurious in case of rupture of the drum-head.

There is frequently considerable naso-pharyngeal catarrh in these cases. Avoid the use of cleansing sprays or douches the first day or two of the attack. The congestion of the ear is very easily increased by them. A half of one per cent. solution of cocaine muriate in distilled water may be used, if there be, as there often is, much nasal stenosis. This may be followed to advantage by a two per cent. solution of menthol, sprayed lightly into the nose and throat. Warn the patient against blowing the nose violently. Carelessness in this regard may cause a recurrence of the pain. Do not inflate the tympanum at this time by any method. That should be done only under expert advice.

If pain continues unabated or increased on the second day, the ear should be thoroughly examined. Evacuation of the tympanic cavity by free incision of the drum membrane may be needed. If promptly done, this may prevent a prolonged purulent inflammation, with all the dangers it entails to hearing and even life itself. The author sums up as follows:

1. Earache, however slight, may signify disease that, neglected, may terminate in loss of hearing, or even of life itself.

2. Recurring earache in children almost always is associated with lymphoid hypertrophy of the pharynx, and permanent impairment of the function of the ear is prevented only by early surgical treatment of the "adenoids."

3. Acute inflammation of the middle ear may be frequently aborted, if proper treatment—mostly of a general sedative character—be administered early in the attack and with precision.

4. If relief be not obtained by the second day, a thorough examination of the ear should be made and proper surgical treatment applied to relieve intratympanic pressure and possible involvement of the mastoid cells or intracranial structures. Failure at this stage to obtain as exact knowledge as possible of the condition of the middle ear is criminal negligence.—*Maryland Med. Jour., Medical Standard.*

---

Voice After Removal of Adenoid Vegetations.—A guarded prognosis is given by Dr. Gibb (*Phila. Polyclinic*, June 26, 1897) as to the quality and character of the voice after the removal of *adenoid vegetations* from the vault, or the excision of hypertrophied faucial tonsils in children of ten years or over. We are apt to believe in the return to a normal voice after these operations, and not infrequently we shall be disappointed. Besides the faulty habit formed, prolonged mouth-breathing brings about changes in the turbinates, and the high-arched palate contributes to an alteration of tone.

# Medical Societies.

## TORONTO MEDICAL SOCIETY.

October 28.—Dr. McMahon in the chair, meeting called to order at 9 o'clock.

Dr. J. F. W. Ross asked if he might say a few words to clear himself of a misunderstanding he thought existed regarding his remarks at the last meeting, regarding the application of forceps to the after-coming head. He had had a pair of forceps made to illustrate the idea he wished to convey. He had frequently had difficulty in applying forceps in these cases, on account of the neck getting in the way and being pinched by them. He demonstrated on the model how this occurred. The forceps he had devised were broader, there being a greater interval between the shanks. In the shanks there is a double antero-posterior curve, so as to bring the blade and handle on a different plane. The blades are shorter than usual. Dr. Ross showed how by the extra curve and greater interval between the shanks the pinching of the neck was avoided.

*Dr. Machell*—Management of occipito-posterior positions.

The management presupposes a diagnosis, so the point is first to make a diagnosis. Fry, of Washington, gives two useful guides to this: (1) The fontanelle, having a position in or near the mid line of the pelvis. This is very suggestive. In occ. antr. cases the fontanelle is away out to the side, but in posterior cases is near the middle; (2) The head fails to fill the pelvis as well as in occ. antr. cases.

McLean, of New York, thinks that short, sharp, snappy, ineffectual pains are suggestive, and when by vaginal examination it is found that no progress is made during the pains. To make sure of the position it is better to insert the hand or a half hand into the vagina and explore, as one finger is not sufficient, the head being high up, and the scalp probably much infiltrated, so as to obscure the fontenelles. Then for diagnosis we have left palpation and auscultation of the abdomen.

By abdominal palpation we find an absence of the dorsal plane; the back of the child is not felt. Palpation of the head in occ. antr. cases is successful only on deep pressure of the fingers down behind the pubes. In occ. postr. cases it is much more easily felt. In occ. antr. cases the extremities are always difficult to make out, and if felt are almost always to the right of the median line. In occ. postr. cases they are more easily felt, and usually in the middle line. With occ. antr. the shoulder is in or near the mid line, with occ. postr. it is more to the right. With occ postr. the fœtal heart sounds are heard far back and with difficulty, whereas when anterior they are found more easily and midway between the umbilicus and middle of Poupart's ligt.

So far for diagnosis. As to prophylaxis all patients should be examined some days prior to labor; but this is impossible in many cases. If the case be seen before labor has set in, the occ. postr. may be changed to

anterior by the knee-chest or knee-elbow position, whereby the child, by gravity, falls away free from the pelvic brim, and the back being heavier sinks toward the mother's abdomen, the child rotating a half circle. The mother should then lie on her left side to maintain the corrected position.

If called to a case after labor has set in, or before the head has engaged, try the postural method again. But it must be remembered that 97½% of these cases terminate as occ. antr. cases.

If extension be moderate, wait and see if flexion will occur. McLean says to wait as long as one hour. If it does not occur, promote flexion by pushing up the forehead. They say this is easily accomplished in the knee-chest position; or the head may be pushed up bodily, and the patient placed on the left side. If this be not successful, an anæsthetic may be given, the os dilated, and with the half hand push the head up, if engaged, and force the forehead upward to promote flexion. This done, withdraw the hand, stop the anæsthetic, and by pressure on the fundus force the head down in its corrected position.

Dr. Ross (Senior) used to rotate the occiput.

If these means be tried and not successful, introduce the whole hand and rotate the head ½ circle and roll over the body as well, and leave it as an occ. antr. case, or apply forceps to deliver; but there is a tendency while putting on the forceps for the child to rotate into its former position. It is better to leave it to nature. If this fail do a version; but here again is the possibility of trouble with the after-coming head.

The speaker spoke of a case of his which began with the occ. postr. He inserted the hand and rotated ¼ circle under chloroform. It slipped back, however, to its former position, chloroform was given again, a version done, and delivery easily accomplished.

It is suggested with occ. postr. to apply forceps in a reversed position, grasping the head well back so as to favor flexion. If too far forward, they increase extension. The speaker objects to forceps at the brim. There is danger to both mother and child.

*When the head is in the cavity of the pelvis*—First maintain flexion by pushing up the forehead, but in the speaker's experience this has not been successful.

In addition to pushing up the forehead, pull down the occiput with the fingers hooked over it and the thumb on the forehead.

Some obstetricians swear by the vectis. The speaker had never used it. It is supposed to act as a rigid perineum, promoting flexion. Reversed forceps are safer here than when head is at the brim. Should the head neither flex nor rotate, it being well down in the pelvis, and the membranes gone, the head may be raised with the hand and rotated—the body also being rotated. This may be done even though the waters have come away.

Or the low operation with forceps may be performed, the blades to the sides of the head and well back upon it to favor flexion. The straight forceps are the better. Forced rotation with forceps is not safe for mother or child.

In the case of occ. postr. persisting, what is best to do? Force flexion

by pulling occiput as much as possible toward the pelvis. Don't hurry till you have to. Allow the head to mould. Better than pull too long on a living child, do a symphysiotomy. Craniotomy is applicable only when the child is dead. It is much better for the mother.

97½% of the cases terminate favorably, it is for the other 2½% that we must work.

Dr. Adam Wright has no criticism to make. He agrees with what has been said. Several methods have been described, but not advised. There are many difficulties and many useless procedures.

First as to diagnosis: External examination is a very good method, very useful and easy, and much neglected.

In o. antr. cases the spine of the child is easily felt. In o. p. cases the feet are felt far back and to the right, which is a point for diagnosis.

When diagnosed, what is to be done? Speaker does not think much of the knee-chest position, for the uterus lies on the bed.

Herman recommends twisting the shoulders around by the abdominal method. As McLean says, unsatisfactory pains are suggestive of o. posterior positions, for the uterus is working at a great disadvantage, a large diameter of the head having engaged a small diameter of the pelvis.

When the head is high up:—Give chloroform, insert the hand, and rotate the head, the body being rotated by external manipulation, but the easiest, by far, is to turn altogether. The speaker does not scruple as to what to do. Some object to this procedure, but this is Dr. Wright's opinion.

When the head is down at the pelvic floor:—Dr. Ross used to push the occiput forward, but when can one say whether he has done it or not, when 97½% go forward, anyway?

There is no curve or circle described by the head; it is a simple rotation. It is remarkable how quickly the occiput goes forward. One minute may do it all.

It is important not to interfere too much. Watch the mother, and if there is reason to hasten matters, apply forceps, but never apply them reversed. Forceps rightly applied and the head gently rotated is allowable, but must be very carefully done. If head begins to rotate, take off the forceps and let it go its own way.

Dr. Wm. Oldright advised the use of the whole hand for diagnosis. Spoke of which hand to use in a given case. In examination, get the two fontanelles in relation to one another and the position of the head is clear. He thinks he has helped rotation with forceps, applied in the natural way and carefully manipulated, slight rotation and traction being applied, the body of the child being at the same time rotated by an assistant by abdominal manipulation. When both are rotated, why wait? So deliver at once. If rotation should tend to take place in the opposite direction to your wish, let it go its own way. If the pelvis be small and the head large, give a chance for moulding by waiting.

Dr. Hunter questioned the ease of diagnosis, and spoke of the mistakes in abdominal diagnosis by the more learned in that department. Never leave to nature. Meddle and interfere when you like; nature is not fit

to take care of these cases. The speaker had never lost a case, had never found such cases difficult.

*Dr. G. Gordon* agreed, in part, with Dr. Hunter. If diagnosis be not easily made with a finger, leave alone. The insertion of one hand for examination is too great a risk when 97% of the cases do well anyway.

Too little stress has been laid upon the promotion of flexion. Flexion must be obtained before rotation can occur. Regarding delivery, he had had one case born with occ. persisting in the post. position. The case terminated rapidly and without much trouble.

Dr. J. F. W. Ross.—With all due regard to Dr. Hunter, he thought abdominal surgery had made great advances. He spoke of a case in point, where everything had been done, but the case ended with rupture of the uterus. In Vienna he was taught to put on forceps in the reversed position, with the pelvis much elevated, but he always hesitated to do so. Forceps help flexion and the head rotates naturally. With regard to his father's procedure in these cases, he said, he assisted the forward and prevented the backward rotation; the operator does not do all the rotating, but endeavors to prevent abnormal rotation.

Dr. Hastings.—Dr. Machell has covered the ground so well that nothing is left to discuss. He expressed his appreciation of the manner in which the subject had been handled. Much importance should be laid upon the maintenance of flexion.

Dr. Carveth suggested that the X-rays would in time be a valuable aid in diagnosis.

Dr. Webster.—In occ. postr. cases the mothers usually felt the fœtal movement on the left side, so they tell him.

Mr. Cameron.—Dr. Ross (Sr.) used to be the only man successful with these cases. Rotation of the head with ordinary forceps is very dangerous. With the straight forceps it is less so.

In reply, Dr. Machell dwelt on the question of diagnosis; there is much in it. Abdominal palpation is a great help, but with all means at our disposal, a diagnosis is difficult. He had never used Herman's method. As to Dr. Oldright's choice of hand for examn., he agreed, the palm of the hand to correspond and apply to the abdomen of the child. As to finding the two fontanelles; it is hard enough to find one, much less two. Forcible rotation is to be condemned. He thought Dr. Hunter's record good. It is a rule not to turn after the waters have come away, but he has succeeded in doing so.

Many of the procedures suggested had not been successful in his hands. Waiting was often necessary and wise. Rotation of head and shoulders (Reynolds'), version, and forceps were all good in certain cases, and perforation was necessary at times.

The meeting then adjourned.

H. C. Parsons,
*Acting Rec. Sec'y.*

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Case occurring in practice. Address,* DR. J. L. DAVISON, 20 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* DR. G. P. SYLVESTER, Business Manager, 585 Church St., Toronto.

**The Largest Circulation of any Medical Journal in the Dominion.**

## Editorial.

### MODERN METHODS IN MEDICAL TEACHING.

Returning to the subject of our last issue, the same tendency to run to extremes seen in some teachers of anatomy, which we noted last month, seems to exist to a positively injurious extent among some teachers of subsidiary subjects of primary study, such as botany, zoology, embryology, and the more important ones of chemistry and Materia Medica. Some of the most beautiful examples of conservatism in this mundane sphere can be seen in our own profession, and why botany should still be taught as it is in some of our best British schools is quite beyond comprehension. The old days of the "apothecary in tattered weeds, culling of simples" are gone for ever, and what bearing a course in field botany can have now on the professional needs of the future physician not even a Professor of Botany can say. Structural and microscopical botany can be made up to a certain point quite as useful as the rudiments of animal histology, and at least a smattering must be admitted as essential, or at least desirable, in any man of average modern education. But that certain point is very soon reached among medical students, and only students in abstract natural sciences should be carried by their instructors beyond the bare rudiments. All these subjects, while useful accessory branches, should be left for postgraduate work, to which the brilliant or ambitious man, whose mental and other qualities are likely in any case to carry him to the front, may devote himself at pleasure, or should be exacted only of those seeking the highest degrees of the colleges, given only after the usual degrees have been taken; but, in our opinion, modern developments in the science and art of healing have quite changed the perspective, and so altered the relative value of subjects that a rearrangement is imperative. And signs are not wanting that that rearrangement will in due time have taken place by the spontaneous action of the colleges, rather than from pressure from without.

### THE VICTORIAN ORDER OF NURSES.

The titled and kindly progenitors of this scheme have evidently not forgotten it in spite of the floods of cold water thrown upon it by the

professions most interested, and by almost all the lay press in whose columns any note has been taken of it. Press notices have been printed by request, carefully sent by interested parties from distant cities, even from some outside the Dominion, but the editorial columns have either been empty of reference, or have contained diplomatic attempts to blow hot and cold at once. The presence of their Excellencies the Governor-General and Lady Aberdeen in Toronto will doubtless bring up the subject again, and we wish to record once more our failure to see anything practicable or urgently necessary in the scheme. Such methods of relief for the pain and misery of the indigent can be effectively applied only where the population is dense, and if the proposal had been to supplement existing organizations of the kind, rather than to snuff them more or less rudely out, both the public and the profession would have been much more apt to take kindly to the idea. We do not claim that even existing organizations have fully covered the needs of their localities, for they have all been hampered by lack of funds, and if Her Excellency's powerful influence had been lent to a plan for consolidating and unifying these, and securing them further support, her undoubted kindness would have been quite as fully recognized by the Canadian public, and the proposal would have been probably a success. As it is, while grateful for the thoughtfulness, not so often seen in high places, for the pains and poverty of the lowly, we wish respectfully to suggest that Her Excellency has misjudged both the needs of the community, the temper of the people sought to be relieved, and the giving capacity of the country. The scheme is so large as to be hopeless, even were the necessity for it proven.

Modification of it might be possible. Indeed, it has been somewhat modified so as to bring it more into line with the work done by the various Deaconess' Orders and Sisterhoods of the churches, with whose work it would seem that it must interfere. The profession, if properly approached with a scheme distinctly different from that so universally declined last year, and presented with some regard to details, can be fully trusted to meet it with a warm welcome.

A recent editorial in a Toronto daily contained the following allusion to the scheme:

The medical men of the Dominion—certainly in Ontario—almost invariably condemn the scheme whenever and wherever it is discussed, and are emphatic in their declarations that it is impractical and unworkable even in its modified form.

Indeed, the only prominent medical men who favor it are one or two at Ottawa and Montreal.

The Provincial Medical Association of Ontario has passed resolutions condemning it, and the Dominion Medical Association at its meeting in Montreal was prepared to pass a similar resolution to that passed by the Ontario Association, but out of deference to their Excellencies, who were in Montreal at the time, the resolution was withheld.

About the same time the British Medical Association met in Montreal, and in its closing hour, indeed, it was but a few moments before adjournment when instead of some 400 being present some twenty were in the hall, a resolution was read and rushed, approving of the project. It was so quickly done that one or two medical men who intended to speak on and against the scheme had hardly time to seat themselves —so rapidly was the endorsement railroaded through the meeting.

The medical men of Halifax have not only declined to endorse the scheme but have by resolution condemned it, while the profession in Winnipeg unhesitatingly disap-

prove of this attempt to float a scheme that, if successful, would materially injure the future of the excellent nurses now being trained in the hospitals of that great western city.

The lady superintendents of the large training schools of Toronto and other cities of Ontario mark the scheme down as not only thoroughly unworkable, but a menace to the trained nurse work of the different institutions.

Indeed, one of the most experienced lady superintendents in Canada residing in Montreal, does not hesitate to freely express her opinion that the project lacks the essentials of success.

One of the proposals for action includes the establishment of small cottage hospitals and homes in outlying country districts and in cities.

In 1896 Dr. Chamberlain, one of the best authorities on the continent in hospital inspection, expressed his opinion in a report to the Government of Ontario The doctor said: "It is to be regretted that there is a disposition to multiply hospitals in localities which do not require them, or where the population will not warrant it," for, he adds, "one hospital well equipped and supported will do much better work than two or more and at much less expense to the country."

Who is there in Ontario who will have the assurance to say that Toronto, Hamilton, London Ottawa, Kingston, Halifax or Montreal are cities that require home or cottage hospitals? Why, in Toronto there are at least 200 beds vacant in all the hospitals all the year round, and yet a suggestion is made to increase the number.

Just how far the powerful influence and patronage of the Governor-General and his wife should be used in promoting schemes which must interfere with and disturb a department of Canadian hospital work that it has taken twenty years to bring to its present high status at an expense of many thousands of dollars, is a question that stands up for answer in the very front of this movement.

No one for a moment doubts the goodness and kindness of heart that prevails in those who represent Her Majesty in this Dominion. No one will deny that this Victorian scheme has surely been called into life with intentions the best and most noble. But when a scheme is propounded that will so interfere with the work of trained nursing and wreck the opportunities of our nurses for making a decent living by their profession, is it not time to call a halt and demand that the efforts of vice-royalty shall be confined to the carrying out of those functions which naturally belong to the representatives of Her Majesty in this Dominion?

## EDITORIAL NOTES AND CLIPPINGS.

### COUNCIL EXAMINATIONS.

The following candidates have passed the primary examinations of the College of Physicians and Surgeons of Ontario, October, 1897:

W. H. K. Anderson, Ottawa; W. S. Burd, French River; T. Bradley, Georgetown; J. A. Ferguson, Easton's Corners; T. A. Gourley, Eganville; Thos. Gibson, Ottawa; E. H. Hooper, Toronto; H. J. Hough, Toronto; H. A. Kingsmill, London; H. Maw, Georgetown; N. Malloch, Marvelville; J. N. MacLean, Sarnia; A. W. P. McCarthy, Stapleton; E. B. Oliver, Ingersoll; J. H. Peters, Fergus; C. A. Page, Toronto; F. Porter, Toronto; F. D Turnbull, Milverton; C. G. Thomson, Hiawatha.

The following have passed the intermediate and final examinations:

Intermediate—T. Bradley, Georgetown; N. E. Farewell, Oshawa; Thos. Gibson, Ottawa; H. A. Kingsmill, London; H. Maw, Georgetown; A. W. P. McCarthy, Stapledon; F. W. E. Wilson, Toronto.

Final—S. R. Clemes, Collingwood; J. A. Ferguson, Easton's Corners; A. Gray, Niagara Falls; T. A. Gourley, Eganville; Thos. Gibson, Ottawa; H. A. Kingsmill, London; N. Malloch, Marvelville; A. E. Ross, Kingston; C. G. Thomson, Hiawatha; E. A. P. Hardy, Toronto.

H. A. Hare, in *Therapeutic Gazette*, September 15, '97, discusses the rate of absorption and elimination of some common drugs, as a guide to their use. The drugs discussed are chiefly of mineral origin, especially the iodides and bromides of sodium and potassium, mercury, antipyrin, arsenious acid. He mentions, also, digitalis, belladonna and aconite.

His remarks on potassium bromide are most extended, and he points out that though very rapidly absorbed it is very slowly eliminated. Rabuteau says that in five minutes it begins to be eliminated. One-half the drug is said by Amory to be eliminated in twenty-four hours, and one-third in the next twenty-four hours, but the remainder exceedingly slowly, traces having been found in the urine by Rabuteau up to a month after taking. He deduces thus rationally the rule which clinicians have empirically established, that in the use of the iodides and bromides that after large initial doses have had their full effect it can be fully kept up by much smaller doses. Neurologists usually so employ these drugs, the general practitioner probably seldom.

A further corollary he gives, that "the administration of either iodides or bromides in frequent small doses possesses no advantages and is apt to disorder the digestion and overload the organism with the drug. They should be given twice or thrice a day in full dose rather than frequently in small doses."—J. T. F.

---

A Mode of Giving a Vapor Bath to a Patient in Bed.—A writer in the *Presse Medicale* for June 19 recommends the following mode of giving a vapor bath without removing the patient from bed: A woollen blanket is placed on the bed under the patient, who keeps on his night-robe. Under each foot and at each side of the body a stone bottle containing boiling water is placed, each bottle having previously been wrapped in a very wet towel and the whole covered with flannel. After the bottles are placed in position, the woollen blanket is wrapped around the patient, and another blanket and an eiderdown quilt are put over him.

At the end of fifteen minutes the patient is in a veritable vapor bath, which induces a profuse perspiration, and he is kept in this condition for a varying length of time, according to the case. In order to favor sweating, one or two cupfuls of some hot infusion should be taken. After the patient has remained a sufficient length of time in the bath, the woollen blankets under him and the bottles are withdrawn without exposing him, and he is then wiped dry under the other blanket and the quilt. At the end of twenty or thirty minutes the patient may have a change of linen.

---

Aneurism and Syphilis.—A study of the connection between aneurism and syphilis in the *Annales de Derm. et de Syph*, for January, by Prof. G. Etienne (*Med. News*), announces that 70 per cent. of 376 cases examined were found to have syphilitic antecedents, and this is a minimum proportion, as it is so difficult sometimes to detect traces of old syphilis. With most of the aneurisms the infection dates from five to twenty-five years. No histological difference between the aneurism of

syphilitics and non-syphilitics was noted with rare exceptions. Mercurial treatment is successful if the gummatous infiltration is still susceptible to absorption without leaving scleroma behind it, so that the tissues can resume their elasticity. When the lesion has advanced beyond this stage, specific treatment is ineffectual. The article concludes with the statement that aneurisms, therefore, with tabes and general paralysis, can be included in what Fournier calls para-syphilitic affections.—*N. Y. Med. Times.*

---

Palatable Castor Oil.—A palatable emulsion of castor oil may be prepared as follows:

| | | | |
|---|---|---|---|
| R | Powd. acacia | 15 | (℥ iv.) |
| | Ol. ricini, fl | 30 | (℥j.) |
| | Elix. sacch | 1 5 | (mxx.) |
| | Ol. almonds (bitter) | 05 | (mj.) |
| | Ol. cloves | 15 | (mij.) |
| | Aq. dest., q.s. to make fl | 60 | (℥ij.) |

Dissolve the gum in sufficient water and add the oil gradually; lastly add the flavoring

Glycosin, saccharin and dulcin are all soluble to some extent in castor oil, and are serviceable in imparting a sweet and pleasant flavor, masking to some extent the disagreeable taste of the oil.—*London Pract.*

---

Chorea Minor.—Use the following as a sedative and antispasmodic for children of five to ten years:

R Lactophenini.....0.15
Quinin. hydrobrom.....0.15
M. Ft. chart, No. X.

Sig. Take one powder three times daily.

For children of ten to fifteen years of age, use:

R Lactophenini..... 0.8
Quinin. hydrobrom..... 0.8
Butter cacao.....10.0

*Atlantic Med. Monthly.*

---

A Powder for Coryza.—

R Subnitrate of bismuth, 1 drachm;
Powdered camphor, 10 grains;
Powdered boric acid, 30 grains;
Hydrochlorate of morphine, 1 grain;
Hydrochlorate of cocaine, 1 grain;
Powdered benzoin, 15 grains.

A pinch of this is to be snuffed up the nostrils.—*Therapeutic Gazette.*

---

The Treatment of Diabetic Coma.—In *La Semaine Médicale*, Lepine, of Lyons, reports still another case of diabetic coma treated with success by two drachms of chloride of sodium and two and a half drachms of bicarbonate of sodium in one quart of sterilized water.

# Book Reviews.

THE ESSENTIALS OF OBSTETRICS.—By Charles Jewett, M.D., Professor of Obstetrics in the Long Island College Hospital, Brooklyn. New York. In one handsome 12mo. volume of 356 pages, with 78 illustrations and 3 colored plates. Cloth, $2.25. Lea Brothers & Co., Publishers, New York and Philadelphia, 1897.

A PRACTICAL TREATISE ON SEXUAL DISORDERS OF THE MALE AND FEMALE.—By Robert W. Taylor, M D., Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. In one handsome octavo volume of 448 pages, with 73 illustrations and 8 plates in color and monochrome. Cloth, $3.00, net. Lea Brothers & Co., New York and Philadelphia.

SIMON'S CLINICAL DIAGNOSIS.—New (2d) Edition, Revised and Enlarged A Manual of Clinical Diagnosis by Microscopical and Chemical Methods. For students, hospital physicians and practitioners. By Charles E. Simon, M.D., late Assistant Resident Physician Johns Hopkins Hospital, Baltimore. In one very handsome octavo volume of 530 pages, with 135 engravings and 14 full-page colored plates. Cloth, $3.50.

THE PRINCIPLES OF BACTERIOLOGY.—A Practical Manual for Students and Physicians. By A. C. Abbott, M.D . Professor of Hygiene and Director of the Laboratory of Hygiene, University of Pennsylvania, Philadelphia. Fourth edition, enlarged and thoroughly revised. Handsome 12mo., 542 pages, 106 illustrations of which 19 are colored. Cloth, $2 75. Phildelphia and New York : Lea Brothers & Co., Publishers.

A MANUAL OF MEDICAL JURISPRUDENCE.—By Alfred S. Taylor, M.D., Lecturer on Medical Jurisprudence and Chemistry in Guy's Hospital, London. New American edition of 1897 from the twelfth English edition. Thoroughly revised by Clark Bell, Esq., of the New York Bar. In one octavo volume of 831 pages, with 54 engravings and 8 full-page plates. Cloth $4.50 ; leather, $5.50. Lea Brothers & Co., Publishers, Philadelphia and New York, 1897.

HARE'S PRACTICAL DIAGNOSIS.—The use of Symptoms in the Diagnosis of Disease By Hobart Amory Hare, M D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Laureate of the Medical Society of London. of the Royal Academy in Belgium, etc. New (2d) and revised edition. In one octavo volume of 598 pages, with 201 engravings and 13 full-page colored plates. Cloth, $4.75. Philadelphia : Lea Brothers & Co., Publishers.

HUTCHISON & RAINY'S CLINICAL METHODS.—Clinical Methods, being an Introduction to the Practical Study of Medicine. By Robert Hutchison, M D., M.R.C.P., Demonstrator of Physiology in London Hospital Medical College and Harry Rainy, F.R.C.P., F.R.S.E., University Tutor in Clinical Medicine, Royal Infirmary, Edinburgh. Handsome 12mo , 562 pages, 137 engravings and 8 colored plates. Cloth, $3.00. Lea Brothers & Co., Publishers, Philadelphia and New York.

THE MEDICAL NEWS VISITING LIST FOR 1898.—Weekly (dated, for 30 patients) ; Monthly (undated, for 120 patients per month) ; Perpetual (undated, for 30 patients weekly per year) ; and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60 patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber Seal Grain Leather, $1.25. Thumb letter Index, 25 cents extra. Philadelphia and New York : Lea Brothers & Co.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS, with especial reference to the application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D , Professor of Therapeutics and Materia Medica in the Jefferson Medical College Philadelphia. etc. With special chapters by Drs. George E de Schweini z Edward Martin and Barton C. Hirst. Sixth edition, thoroughly revised and largely rewritten. In one octavo volume of 756 pages. Cloth, $3.75 ; leather, $4.75. Lea Brothers & Co., Publishers, Philadelphia and New York, 1897.

# Publishers' Department.

Mr. Charles Fowler, of the well-known firm of Scott & Bowne, makers of "Scott's Emulsion," has returned to the head office, New York. His successor is Mr. George C. Hawkins, who was born and brought up with Scott's Emulsion, he having been with the firm ever since he left school. It will be a very short time until Mr. Hawkins will enjoy the same popularity among the medical profession as that possessed by his predecessor, Mr. Fowler.

---

Professor Bogoslowsky on "Apenta."—"W. S. Bogoslowsky, from clinical observations on the action and value of a constant bitter water, draws the following conclusions (*Transactions* of the Moscow Section of the Society for the Preservation of Public Health, No. VI.):

"Systematic treatment with Apenta water is especially indicated for constipation produced by atony of the bowels, and it has the advantage that its use does not give rise to subsequent constipation.

"Its action is more gentle than that of some other bitter waters because it contains less calcium sulphate and no magnesium chloride. It is probably owing to this circumstance that it does not cause crampy pains.

"The efficiency of Apenta as a remedy for the systematic treatment of obesity is clinically established."—*The British Medical Journal*, August 28th, 1897.

---

Sir James Grant, M.D., Expressed a Most Favorable Opinion of Taka-Diastase.—In a recent letter, Sir James Grant, of Ottawa, Canada, late physician to H.R.H. Princess Louise, reports his experience with Taka-Diastase in the following language: "I consider Taka-Diastase a powerful solvent of material which has undergone only partial digestion as a result of defective gastric action. The intense hurry of everyday life is such at the present time that the gastric functions are more than commonly subjected to abnormal influences. Under such circumstances I have closely observed the action of Taka-Diastase and the remarkable manner in which it aids digestion without taxing the system in the slightest degree. I have recommended it in Canada and England with great pleasure and satisfaction, and I predict for it a wide use, owing to the fact that it serves as a remedial agent not previously at the command of the medical profession."

---

One of the greatest successes throughout the United States has been the Elastic Felt Mattress. They are but little known as yet in Canada, as the duty made them too expensive. They are now being made in this country by the Alaska Feather and Down Co., of Montreal, and they are being sold at the same price as in the United States. It has been adopted by hundreds of hospitals and sanitariums over there, and should be taken up here by all our hospitals at once on account of its being sanitary, absolutely pure, and vermin-proof. It never mats and never loses its shape. Another leading feature of this company's busi-

ness is a mattress made for hospitals exclusively, in which the cover can be taken off and the contents taken out bodily and be thoroughly disinfected. This will commend itself at once to every physician. The Alaska Feather and Down Co. will be glad to furnish all particulars, price, etc., to any physician dropping them a card. There is not the slightest doubt that this mattress will immediately take precedence over any other mattress now on the market.

---

Davis & Lawrence Co., Montreal.—We are pleased to bring again to the attention of our readers a strictly pharmaceutical preparation which is really what its name implies, "A Liquid Malt Extract," manufactured by Messrs. John Wyeth & Bro., Chemists, whose reputation amongst the physicians is of the very highest, as manufacturers of fine pharmaceutical articles. Their Malt Extract has been, and is, prescribed for many years by us and we have perfect confidence in it. One of the features of it is that it contains only sufficient amount of alcohol (less than 3%) to keep and preserve it, and as the quantity is so small we are able to prescribe it freely to weak and delicate children, and nursing mothers, without danger of their getting too much stimulant. We would, however, caution those who wish to prescribe it in their practice to be careful and specify "Wyeth's," as we know there are a great many so-called Malt Extracts in the drug-stores which contain so large a proportion of alcohol that it is not safe to leave it to our patient's choice, as they might be persuaded to buy something that would be absolutely injurious, because a little cheaper in price, or upon which the druggist would make a little more profit.

---

In 1865 the first salt well was sunk in Canada, and since that date numerous sources of supply have been discovered in this country; but the process of manufacture was generally crude and the product necessarily impure.

The Windsor Salt Co., Limited, appreciating the urgent necessity, especially to our cheese and butter industries, of an absolutely pure article, established the Windsor Works, which to-day produces the purest and best salt in the world.

Under the old, crude methods of manufacture no provision was made to remove the lime, magnesium, etc., from the brine; but with the process in use at Windsor the dominant principle is pure salt, and from the time the brine leaves the wells till the pure salt reaches the packages for shipment, it is not handled except by the machinery of the factory. The following extracts from reports will prove interesting. From that made by Francis E. Englehardt, Ph.D., Syracuse: "The result of my analysis of your salt brine shows that it must be classed among the best on this continent." Also from that of Prof. Ellis, M.A., M.B., Professor of Applied Chemistry, Toronto School of Practical Science: "This sample contained practically 30 per cent. less impurity than any one of the eight samples of Canadian, American, and English salt which I analyzed at the same time."

"Purest and best" is aptly applied to Windsor salt, there being no better salt made.

# The Canada Lancet.

VOL. XXX.] TORONTO, JANUARY, 1898. [No. 5.

## *CONTRACTED FOOT.

BY

B. E. McKENZIE, B.A., M.D.

Orthopedic Surgeon, Hospital for Sick Children; Assist. Prof. of Clinical Surgery (in charge of Orthopedic Surgery), Ontario Medical College for Women:

AND

H. P. H. GALLOWAY, M.D.

Orthopedic Surgeon, Toronto Western Hospital.

The term employed as the subject of this paper may not be familiar to the profession, and has found its way into surgical literature only in recent years. It is possible, too, that the judgment of the profession may not endorse the introduction of a new term, on the ground that terms already employed fully describe all cases.

In 1885, Schaffer described a disability of the foot as "Non-deforming club-foot," and various authors since then have made favorable reference to his description, endorsing it as a distinct clinical variety of club-foot.

Without, therefore, claiming that any distinct variety is described, in using this term, which might not be included under the terms Talipes Equinus and T. Cavus, yet our observation points so directly to the fact that there is a class of cases having a clinical similarity and individuality that we shall, for the sake of discussion, arrange them under this heading. The cases here described include a wider range and larger variety than is implied in Schaffer's original description.

The term "Contracted foot," which has been more recently employed as synonymous with Schaffer's "Non-deforming club-foot" is eminently descriptive of a class of cases of foot disability not infrequently seen by the surgeon. There is generally deformity of considerable degree as well as disability, and in old cases the deformity is sometimes strongly marked (Fig. 1) and the disability so severe as almost to prohibit walking.

"In non-deforming club-foot," Schaffer writes, "all the conditions found in certain forms of talipes exist, with the exception of the exaggerated deformity. That is, there is a loss of normal relation between the articulation at the ankle and the muscles which act upon it, involving also, in many instances, the tarsus, producing a condition which prevents flexion at the ankle joint, and modified mobility with slight deformity at the tarsal, metatarsal and phalangeal articulations. With

*Read at the meeting of the Toronto Medical Society, Nov. 11, 1897.

Fig. 1.

this state of affairs we find as a result, varying with the conditions present, actual disability, pain, sometimes very severe, in various parts of the foot, ankle, leg, and even reflected to the lumbar region, and tender and inflamed articular surfaces, especially at the junction of the first metatarsal bone with its phalanx."

His description and the term employed, though applicable to the slighter cases, are manifestly inappropriate to those which are more advanced, as will appear from the cuts and descriptions here presented.

We are unable to draw the line where Dr. Schaffer has done, as a case which at one time answers to his description may at a later date present exaggerated deformity.

Lovett says that in a series of tracings of the feet of young women the condition was found present in one case in ten. We have not found it nearly so common, in fact, much less common than other varieties of acquired deformities of the foot.

In very early cases we have found troublesome anomalous symptoms before any deformity was recognizable. Case one related in this paper will serve to illustrate this point. I was led to suspect commencing flat-foot when first consulted. In two years afterward the deformity was such as to demand operation.

In a moderately advanced stage the

affection is recognized by the impress made upon smoked paper, showing slight or no contact of the arch, by the tense condition of the plantar fascia by limitation of dorsal flexion, and by slight dorsal luxation of the toes, affording an example of a slight case of "clawed toe." In far advanced cases the deformity is at once seen on inspection, and consists in a more marked condition of the signs just referred to. The plantar surface and the dorsum are strongly arched, the tendo-Achillis shortened, the toes islocated dorsalward, the metatarsal bones at their distal extremities are tilted downward, making them approach the perpendicular, so that the body weight falls upon their heads; the foot is shortened, dorsal flexion greatly limited, the plantar surface, when the patient stands erect, touches the ground only at the distal extremity of the metatarsals, and the leg muscles are atrophied. The part of the foot distal to the medio-tarsal joint may be deflected outward so as to give a variety of valgus, or more commonly, be inverted, causing varus. In a similar manner the foot may be pronated, throwing undue strain upon the internal lateral and calcaneo-scaphoid ligaments, or, more generally be unduly supinated.

Fig. 3.

The symptoms which I have found present in early cases are tenderness upon pressure in the arch, pain and tenderness about the heel, and pain running up the leg and thigh. The gait may best be described as one deficient in elasticity and grace. In extreme cases walking is attended with much difficulty.

It is doubtful whether, viewed from the standpoint of pathology, this affection is a distinct entity. In some cases the affection has followed in the wake of an infantile spinal paralysis. Much more commonly, however, there is some form of progressive paralysis.

Case I.—March, 1895. S.D., a girl of 10, referred to me by Dr. Caldwell of Peterboro.' Good family history. The present affection came on gradually. No history of an illness which laid her aside from walking. Left heel tender, some swelling, especially at the insertion of the tendo-Achillis. Sometimes walks without placing left heel on the ground. Some complaint made and some change in the gait noticed since Sept.,

1893, since which time periods of rest, more or less prolonged, have been advised and secured. Disease of the os calcis, periostitis, and hip disease have all been suspected in turn by different observers who have examined her. After careful consideration of the case I made a probable diagnosis of Achillo-dynia.

May, 1895. In addition to symptoms before named there is now found a tilting of the pelvis and consequent lateral curvature of the spine, resulting from the more marked disability of the left foot. The left calf and foot show slight atrophy as compared with the right. Expressed the opinion that this is a case of "non-deforming club-foot" (according to Schaffer).

Feb., 1896. Atrophy of left leg is now more marked. It is half-inch shorter and calf is three-fourths inch smaller. The left foot is noticeably more arched than the right and measures two sizes shorter.

Fig. 4.

April, 1897. Treatment recommended has not been followed. Dr. Caldwell informs me that deformity increased to such an extent that he performed an operation for its relief.

CASE II.—April, 1896. Rev. L. D. W., 46 years, (Fig. 3) walks with a gait entirely wanting in elasticity and grace. Never was laid aside by any sickness. When a boy at school could run as fast as his fellows, and was in every way as active as they. As he grew toward manhood, working on a farm, he remembers that there crept on gradually some trouble in the feet and legs manifested by increasing liability to fall, and in lessened activity. These symptoms have been slowly progressive till the present.

A very interesting feature in this case is that this is distinctively a family affection. An older brother had some disability of the feet and limbs, similar in kind, which finally induced him to quit farming. Also a sister has some similar affliction the exact nature of which he does not know. A daughter twelve years old presents similar deformity and symptoms. One child, four years old, manifests some similar symptoms. Other children in the family of six are free from disability.

In the majority of cases seen by the writers, the history of the deformity is that of an insidious beginning and steady increase, while in a small minority of cases the condition evidently followed an attack of anterior poliomyelitis. The conditions found present, however, in these latter cases would seem to indicate a lesion other than that which is the anatomical basis of an infantile spinal palsy.

In an article by Herbert Allingham, in the *Br. Med. Journ.*, Oct. 2, 1897, is shown a cut of a typical case of contracted foot, and concerning the pathology of which he says it is probably due to an affection of the crossed pyramidal tract. The cut of foot shown in Dr. Allingham's article is from a case of Friedreich's ataxia. If this surmise be correct, may it not be that this part of the cord is similarly affected is some cases of varied diseases, thus giving the affection a definite pathology, though associated with different forms of spinal cord affections nosologically considered?

Treatment resorted to early is productive of much benefit. A simple night appliance strapping the arch down and keeping the foot at an acute angle with the leg, together with good boots worn in the day-time, have given much satisfaction. Frequently it is necessary at the commencement of treatment, however, to perform fasciotomy and tenotomy, to place the foot in an improved position. These feet are found frequently to be very rigid and unyielding. More than six hundred pounds force we have sometimes employed without satisfactorily replacing the foot. The most successful results follow an early diagnosis, and an intelligent and persistent use of mechanical means.

12 East Bloor Street, Toronto.

---

NITRO-GLYCERINE FOR SCIATICA.—Troussevitch has cured several obstinate cases of sciatica by giving the following drops:

℞ Solution of nitro-glycerine (1 per cent.)..... ℥ ss.
Tincture of capsicum..... ℥ iss.
Peppermint aq..... ℥ iij.

M. Sig. Five drops thrice daily in a tablespoonful of water for the first three days, then ten drops thrice daily on the subsequent days.—*Practitioner.*

---

REFERENCES.—*N. Y. Med. Rec.*, May 23, 1885, p. 561; Bradford and Lovett, Orth. Surg., 746; Young, Orth. Surg., p. 353; Tubby, Deformities and Orth. Surg., p. 352; Lovett in Parks' Surg., vol ii., p. 665.

*Editor* "CANADA LANCET."

SIR,—When at the Ontario Medical Association meeting in June the subject of the "Victorian Order" for providing District Nursing was discussed, I was in full sympathy with the resolution passed by the Association in respect to that subject. Why? Because the object of the nursing project from having been misunderstood, and perhaps in a measure unwittingly misrepresented, I was under a false impression in respect to it.

Since Dr. Worcester, of Waltham, Mass., who has made a special study of the subject both in Europe and America and has had much practical experience in district nursing amongst the poorer classes in Massachusetts, has been in Ottawa and explained the working of such a system and its most excellent results my views have changed; as also, I particularly desire to state, have the views of a number of the medical practitioners of this city with whom I have had converse on the subject.

To be brief, three special advantages may be named as almost certain to result from the proposed nursing scheme, if carried out, as follows:

FIRST.—It would be a decided advantage (rather than a disadvantage) to our already somewhat considerable army of regular nurses, by increasing, probably in a little time quadrupling, the demand for these "ministering angels."

The new Order of nurses would go forth amongst the sick and distressed of the poorer classes, *visit* them, only, say for an hour or so (never remaining, as for a day or a week), for a small sum paid to the Home, not to the nurse.

One of them would be sent out, say to a woman at the commencement of labor, by the physician engaged, she would take the place at the bedside and in the room of the very incompetent neighbor or friend, or even mother, of the patient, now commonly in attendance. With a knowledge of the requirements of the case, with kindly sympathy, tender and *clean* hands, she would arrange everything for the comfort of the patient, the prospective baby, and also for the coming physicain, and in the best possible manner, very different from that in which they are now commonly arranged; sometimes providing, from the Nurses' Home, certain necessaries not obtainable in the patient's house.

If properly chosen or selected, as naturally adapted to this sort of semi-mission work, the district nurse would bring such a stream of sunshine (really and figuratively, with fresh air), such confidence, cheerfulness, hope and comfort, as would not only produce a favorable individual effect on the patient, but cause her family and neighbors to make great efforts on other occasions of the kind to employ a regular outside nurse for some days or a week or two, in order to have the benefit of a nurse's constant attendance instead of only visits.

So in a case of pneumonia, of enteric fever, of acute rheumatism, pulmonary tuberculosis, or any other disease. The very natural result of this sort of nursing would be, and as appears to have been Dr. Worcester's experience in Waltham, to greatly increase the demand for the regular nurse, as now provided.

SECOND.—The District Nurse is to be sent only under a physician, it appears, in all cases, and she cannot fail to prove a very great time and labor saver to the physician in all cases in practice which she attends, especially in midwifery practice. This, Dr. Worcester states, is his experience. She will let the attending doctor know just when he is needed at the bedside, saving him hours of patient, or impatient, waiting; or "watching" calls or visits; she will enable him to leave the case sooner, and to know when other after calls would be most needed by her morning visit to the patient and reporting the conditions.

THIRD.—The District or Visiting Nurse would by her sympathetic presence and other personal characteristics, and her knowledge and acts, bring into the often unventilated, unclean, perhaps darkened, noisy, ill-managed, unhappy house of the sick, pure air and light, cleanliness, quiet, comfort, etc., and so assist immensely to promote recovery and health—abbreviating the period of illness, preventing suffering, despair, death—in a word, to lessen the mortality by modifying and removing the cause of it, wherever she might be sent.

Trusting the above may enable the readers of the LANCET to a better understanding and appreciation of the proposed "Victorian Order,"

I am, etc.,

EDWARD PLAYTER.

OTTAWA, November 25th, '97.

---

TO CURE ITCH IN TWO HOURS.—Employ fresh sulphuret of calcium made as follows:

℞ Sulphur (flour), 3 ounces.
Quicklime, 6 ounces.
Water, two pints.

Boil together till combined, then allow to cool and settle. Decant and preserve in hermetically sealed bottles.

Application—Rub patient all over with soft soap for half an hour, then place in a tepid water bath for another half hour. Next rub over with the solution and allow it to dry on the skin for a quarter of an hour. Complete by washing in the bath.—VLEMINKX (Belgium).

---

THE BRANDT METHOD.—This consists essentially in *friction* baths at a temperature of 65° F. every three hours, when the temperature is 102.5° or higher. It is the safest, most grateful and most successful single means of combating typhoid fever.

---

DROPS FOR ATONIC DYSPEPSIA.—

℞ Tincture of nux vomica, 2½ drachms;
Resorcin, 7 grains.

Mix and take five to ten drops three times a day.

—*Therapeutic Gazette.*

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

## SOME REFLECTIONS ON APPENDICITIS.

On the ground of an extensive experience in appendicitis, Dr Le Dentu, in an instructive paper read before the Paris Academy of Medicine, concludes as follows:

1. While it is true that a large number of appendicitis cases should be treated by surgical means, there are some in which a definite or temporary cure can be secured by internal medication. These comprise cases in which, at no time in their evolution, are complicated by threatening peritonitis or peritoneal septicæmia.

2. There are some appendicitis cases which go on regularly to the formation of an abscess. Sometimes these are characterized by a frank inflammatory reaction; sometimes the phlegmasia is well localized to the cæcal region; sometimes the malady runs a natural course without signs of impending danger, and here it may be of advantage to allow the abscess to accumulate and become circumscribed before resorting to interference. The formation of the pus collection is revealed by local signs (localized pain, a tumor of the form of a breast-plate or globular, fluctuation), and general signs—increase of fever, more or less restlessness, followed quite often by a remission coincident with the arrest of pus formation. In these patients early intervention is not, in my opinion, without risk. It can result in a dispersion of the agents of infection confined to a limited area, and this result is to be more feared than the appearance of pus in the first few hours.

3. Surgical intervention becomes opportune and necessary when it is believed, from the signs given above, that a focus has formed. The operation varies in technique according to the situation of this focus. If situated directly beneath the abdominal wall, a simple incision of all the layers is sufficient. It is necessary to guard against the rupture of adhesions (except cases where one has reason to suspect the existence of multiple foci) and against trying to enucleate the appendix. It should be left in place if it is not floating or easily detached, and one should confine himself to suturing any perforation that may be discovered. Tamponnade of the abscess cavity and partial suture of the abdominal wall complete the operation. If at a later period an eventration should re-

sult, this furnishes an opportunity for searching for the appendix, and it is possible to determine whether all or nearly all the adhesions have disappeared, whether the intestine has again become entirely free, and to adopt the proper treatment.

4. If the focus is deeply situated, the operation is more delicate and also more dangerous. To penetrate down to it, it is necessary to break up some adhesions, taking all known precautions for preventing soiling of the neighboring parts: in a word, to guard in every way against operative infection. The diseased parts should be isolated by a tampon. But in spite of the best selected measures, it may happen that the peritonitis becomes general and that death results. If performed early in the cases characterized by a frank inflammatory reaction, the operation cannot be considered as absolutely inoffensive, while if delayed until the time when an abscess has formed, it is not entirely secure, for the above reasons. Among the cases which go on to pus formation, there are, therefore, those which are benign on account of the anterior situation of the abscess, and those which are dangerous on account of its posterior or deeper situation. In the latter no regret need be felt for not having interfered early, since the initial symptoms are often not menacing.

5. In the following conditions surgical interference should be resorted to as early as possible:

(*a*) When the patient presents, at the outset, the symptoms of a general peritonitis, or when in the course of an appendicitis the signs of extension to the peritoneum manifest themselves. These cases should not be confounded with those of simple tympanites, accompanied with a certain amount of tenderness at a distance, indicative only of peritonism, or peritoneal irritation, without septic peritonitis, properly speaking.

(*b*) When depression manifests itself under one of the following aspects: Absence of spontaneous pains, temperature normal or a little below, with a frequent and small pulse; diminished secretion of urine; abdomen not distended, but retracted by contraction; facies shrunken and sometimes betraying signs of suffering; color more or less dusky, bluish color of the extremities, especially of the nails; voice feeble; respiration a little accelerated, without being sighing.

6. It is always risky to abstain from operative interference in cases in which there is a recurrence of symptoms. Inasmuch as operations during the intervals between the crises give excellent results (for my part I regard them as absolutely inoffensive), the fundamental treatment of appendicitis should be to prevent these subsequent attacks. If one is not forced to operate by the recurrence of an attack, it is best, according to Roux, to wait five or six weeks, since at that time the adhesions formed by exudates, have, in general, disappeared, and the operation becomes extremely simple. There is every assurance of success, and the patient is once for all freed of a menacing danger.—*Bulletin de l'Academie de Médicine.*

---

There is positively no place in legitimate surgery for colpo-hysterectomy, or high or low amputation in cancer of the cervix, except when performed through the agency of the galvano-cautery.—*J. Byrne.*

## BONE GRAFTING FOR UNUNITED FRACTURES.

Dr. A. M. Phelps read a paper and presented an illustrative case. Among the causes of ununited fracture were lack of nutrition, foreign bodies between the fragments of bone, bad coaptation, and sclerosis. Different methods had been resorted to with more or less success for inducing union. Thomas, of Liverpool, had suggested hammering the fracture with a mallet, then putting the limb up in plaster and allowing the patient to walk, thus grinding the ends of the bone together. Senn had suggested putting in decalcified chips of bone between the ends of the fractured bone. Another method was to turn in periosteum and pin the bones. In the cases which he had to report in his paper, eleven in number, one or more of these methods had been tried unsuccessfully before he had attempted bone grafting. His first attempt at bone grafting, different from that which he now practised, occurred about 1890, at one of the city hospitals, and was the source of a good deal of newspaper notoriety. A portion of the forearm of a dog, still retaining its nutrient attachment to the dog, was grafted into the ununited bones of a child's limb, and the two were bound together with plaster. But the dog became restless, squirmed in his plaster jacket, and it was necessary to separate it about the tenth day. The graft did not unite. He then adopted the plan which had succeeded in the patient presented and in several others. It consisted in taking numerous chips of the forearm of a dog, preferably a pup, and grafting them into longitudinal splits of the periosteum covering the ends of the bone which had just been cut down upon and wired together. The chips of bone started centres of ossification which resulted in good bony union. They seemed to act not unlike skin grafts on the surface of the body. In the case of the young woman presented, who had had ununited fracture of the bones of the forearm, he had employed about fifty bone grafts. Subsequently about a dozen of them came to the surface and were removed, but the remainder "took." There was slight shortening of that arm, but its use and power seemed normal. In one of the successful cases the bone grafts into the arm were obtained from the knee of another patient, on whom he was doing excision. In the case of a man who had no use for his little toes because of the presence of corns, he utilized these for bone grafts into his ununited fracture. Out of the eleven cases two came to amputation, one resulted in fibro-osseous union, in eight there was perfect bony union. All were of the extremities, five of the leg. There were successes, there were failures. He gave the method for what it was worth. When other methods failed, he thought this one of bone grafting should be tried before resorting to amputation.

Dr. Phelps had given up silver wire for uniting the bones. It was too fragile. He used strong steel wire and attached it to screws put into the bones.

Dr. Curtis asked whether the grafts of bone themselves grew, or whether they simply stimulated growth from the ends of the bones and then disappeared, as seemed from microscopical examination to be the

case when blood clot filled the intervening space. In the case of ununited fracture of the tibia he suggested that the gap might be filled by dividing and pushing in the fibula, and thus avoiding much shortening of the limb. He had used decalcified bone in a case of ununited fracture of the femur without success, and subsequently amputated.

Dr. Willy Meyer suggested the use of the method of Bardenheuer, turning a piece of the same bone with periosteal and muscle attachments over into the gap, as one would slide or transplant skin to fill a surface gap.—*Med. Record.*

## SURGICAL ITEMS.

Chloroform is a more satisfactory anæsthetic than ether for operations liable to be complicated by difficult or suspended respiration: in those cases it is reasonably safe, and when carefully administered it may be confidently recommended to the profession for this particular kind of surgical work.—*Gay.*

Do not operate on a porencephalic child and expect to cure epilepsy. Do not, as a rule, operate on a case of post-hemiplegic epilepsy in a child and expect to cure. Do not operate on an old, idiotic epileptic, a victim of idiopathic epilepsy, with general convulsions of years' standing.—*E. G. Mason.*

I believe that pronation, with or without flattening of the arch, is the factor to study, and that its prevention and its cure are the prevention and cure not only of flat-foot, but of the painful affection without breaking down of the arch which I speak of as pronated foot: that the selection and use of proper boots will cut down very much the use and need of mechanical appliances.—*Lovett.*

I have come to the conclusion that it is never necessary to resect for artificial anus. I have had a good many cases of fæcal fistula, and in nearly all I have succeeded in bringing about closure by an external operation, without opening the peritoneum. For the resection of tumors, it is vastly preferable to do the operation in two sittings; such cases all recover.—*Greig Smith.*

There is no question that the more cultivated dentists know the surgery of the mouth better than the surgeon who has been only generally trained; know better also the relations of disorders of the oral cavity with contiguous and distant tracts, and are better prepared to diagnosticate the cause of many obscure lesions connected with those relations.

I therefore recommend to the surgical profession, particularly to those who have had no special opportunities for studying the diseases of the mouth, the calling in of a skilful dentist, preferably one who has been medically educated, at least for the benefit of his judgment in diagnosis, whenever there is room to suspect oral complications.—*Lennox Curtis.*

SURGICAL TREATMENT OF EPILEPSY.—In a paper on this subject, read before the late meeting of the American Neurological Society, the following conclusions are presented by Professors Gerster and Sachs:

1. That surgical interference is advisable in those cases of partial

epilepsy in which not more than one or, at the utmost, two years have elapsed since the traumatic injury or beginning of the disease which has given rise to the convulsive seizures.

2. In case of depression or other injury of the skull surgical interference is warranted even though a number of years have elapsed, but the prospect of recovery is brighter the shorter the period of time since the injury.

3. Simple trephining may prove sufficient for a number of cases, and particularly in those cases in which there is an injury to the skull, or in which a cystic condition is the main cause of the epilepsy.

4. Excision of cortical tissue is advisable if epilepsy has lasted but a short time, and if the symptoms point to a strictly circumscribed focus of disease.

5. Since such cortical lesions are often of a microscopical character, excision should be practised even if the tissue appears to be perfectly normal at the time of operation, but the greatest care should be exercised in order to make sure that the proper area is removed.

6. Surgical interference for the cure of epilepsy associated with infantile cerebral palsies may be attempted, particularly if too long an interval has not elapsed since the beginning of the palsy.

7. In cases of epilepsy of long standing, in which there is in all probability a widespread degeneration of the associated fibres, every surgical procedure is absolutely useless.

---

THE SURGICAL RELIEF OF OBSTRUCTION OF THE COMMON DUCT BY BILIARY CALCULI.—H. O. Marcy, of Boston, described the operation which he had been the first to do for the removal of calculus situated in the common duct. The original operation had been done on October 20, 1889, according to the following method: The walls of the common duct were divided with scissors and their edges everted from over the calculus, the abdominal cavity having been previously shut off from the field of operation by sponges. With a fully-curved needle, armed with selected tendon-suture, the divided edges of the thickened mucous membrane of the duct and gall-bladder were united by a continuous suture. Over this the peritoneal edges were coaptated by a layer of continuous suture, and then a third layer of continuous sutures was applied, the sutures being taken parallel to the long axis of the wound, and through the peritoneum. Tension on this suture buried not it alone, but also the uninjured peritoneum. After the removal of the sponges, the peritoneum was closed with a continuous double tendon-suture. The divided muscular structures were united in a similar manner in separate layers, and the skin was coaptated by a layer of buried tendon-sutures. The wound was sealed with collodion. Convalescence was rapid. The calculus, when dried, weighed fifty-nine grains.

---

TUBERCULOUS PERITONITIS.—Dr. R. Abbe concludes as follows with reference to the surgical treatment: We can say, that now, more than at any time in the past, it is the imperative duty of the surgeon to freely evacuate by incision all fluid of a tuberculous peritonitis. In all prob-

ability, additional perfection will be obtained by irrigation with normal salt solution, and closure of the abdomen. Where advanced tubercular deposits can be sponged over with camphor naphthol, it is probable some additional good will accrue. The cure in undoubted tubercular cases may be absolute, though remnants of disease are apt to be latent. The purulent form of tubercular peritonitis is amenable to the same treatment. As regards the general disseminated tuberculosis, with tubercular peritonitis, we must, if we read the cases aright, regard that as occasionally capable of cure. Patients in almost moribund condition, with extensive ascitic form, have been frequently restored to health. The treatment by puncture may be dismissed as inadequate. The power of the peritoneum to suppress a widespread tuberculous infection cannot be doubted, and its mode of action is through reparative inflammation, embedding the bacilli, and forcing retrograde metamorphosis. Cure has frequently followed a second laparotomy when the ascites has reaccumulated—which is the exception—*Med. News*, Aug. 1, '96.

---

Pneumotomy—Dr. H. Quincke has carefully investigated this subject on the ground of fifty-four cases, including seventeen of his own, and comprising abscesses, gangrene, gangrenous abscesses, bronchiectases, and suppurative processes due to the presence of foreign bodies. The diagnosis is difficult, but by a careful study of the history, a minute examination of the patient, and a close analysis of the symptoms, it can usually be made with sufficient accuracy to warrant operation. As long as urgent danger to life does not exist, the slow method should be given the preference. This consists in the production of firm pleural adhesions by the application of zinc paste. He points out that in parenchymatous inflammation of the pulmonary tissues adhesions are quite frequently absent, or if present are not firm. For this reason he regards exploratory puncture for suspected purulent foci as dangerous. The prognosis of operative treatment is rather unsatisfactory (acute cases gave sixty-five per cent. cures, thirty-five per cent. deaths; chronic cases twenty per cent. cures, thirty-eight per cent. deaths, forty-two per cent. no improvement or incomplete results. As the outcome of internal treatment is still less favorable, the author advises surgical measures as soon as no tendency to a spontaneous cure exists.—*Ther. Monatsch.*, June, '96.

---

Relief of Thirst After Abdominal Operations.—Dr. J. G. Clark (*Maryl. Med. Jour.*) says that for the last two years it has been a part of the concluding technique of every abdominal operation performed in the Gynecological Department of the Johns Hopkins Hospital to inject one liter of normal salt solution into the rectum, and the result has been so very satisfactory that they now propose to adopt it for all operations, even of minor degree. In order that the patient may retain the enema, she must yet be under the anæsthetic when it is given, otherwise the rectum will not tolerate such a quantity of liquid.

At the conclusion of the operation, before the abdominal dressings are applied, the patient is elevated to the medium high Trendelenburg posture, a stiff rectal tube is inserted well up into the sigmoid flexure, and

the fluid slowly poured into the glass funnel, which is held three or four feet above the level of the patient's buttocks. In this posture the solution gravitates downward into the sigmoid flexure and colon and is very rarely expelled, even during the most violent attacks of retching and vomiting during the recovery from anæsthesia.

---

POSITION IN THE TREATMENT OF FRACTURES OF THE LOWER END OF THE HUMERUS.—On the ground of 650 cases under the care of Drs. Hartley and Woodbury, Curtis, Van Arsdale and himself, Dr. C. A. Powers asserts that the best results are obtained by treating the limb in the flexed position, and that the general practitioner will find the greatest degree of satisfaction in following this form of management. It is his custom to put the limb up in plaster of Paris at about 90° when first seen, except in those cases in which a tendency to "gunstock" deformity was apparent. In these latter instances he has made the angle 135° for ten days or two weeks, reduction being made under an anæsthetic with careful attention to the "carrying-point," and then changing the angle to 90° or to 80°. He is convinced that the extended position is not necessary to the obtaining of suitable coaptation of the fragments, and he is by no means sure that a moderate degree of cubitus varus is prejudicial to the usefulness of the limb.—*Medical Record*, May 2, 1896.

---

GUNSHOT WOUND OF THE STOMACH.—Dr. L. A. Woolson (*Nashville Jour. of Med. and Surg.*, June, 1896) reports a case, male, 25, operated on sixteen hours after wound was received. The patient was weak from loss of blood and abdomen distended from internal hemorrhage. The ball, 38-caliber, entered the stomach at the cardiac end and had severed the gastro-epiploica sinistra artery, which was still bleeding. The ball emerged to the right of the esophageal opening, then made another perforating wound, an inch long, in the pyloric end of the stomach. The ball was not located, but the direction of its course indicated lodgment in the liver. Temperature the day after operation, 98.5 degrees. He was discharged, cured, on the twenty-first day. The points of interest in this case were the rapidity of healing and completeness of cure, the absolute absence of fever after the operation was performed, notwithstanding its gravity and extent, and finally, that an artery, the size of the one severed, should have remained unsecured for sixteen hours and not have resulted in death from hemorrhage.—*Jour. Am. Med. Assoc.*

---

RUPTURED URETHRA.—According to Dr. A. T. Cabot, the principles of treatment are as follows:

1. In case of ruptured urethra, immediate perineal section with suture of the urethra should be practised.

2. By this procedure not only do we greatly lessen the danger of urinary infiltration and abscess, but we also, in a large proportion of cases, may hope to prevent the formation of close intractable strictures.

3. In an early operation, the search for the posterior end of the urethra is much easier than it is later. The hemorrhage from the branches of the artery of the bulb serves as a guide to that end of the canal.—*Bost. Med. and Surg. Jour.*

THE MECHANICAL TREATMENT OF INGROWN TOE NAIL.—Dr. Henry Ling Taylor, of New York, recommends the following method, modified from that devised by Mr. Masters, of England: A flat strip of silver, one-one-hundredth of an inch thick, and one-eighth of an inch wide, and one inch long, is bent into the shape of a fish-book. The toe having been cleansed with peroxide of hydrogen and moistened with a solution of cocaine, the hook is inserted under the lateral edge of the nail so that the shank of the hook curves over the side of the toe and lies close to it. The greater the ulceration the less the pain in inserting the hook. It is retained in place by adhesive plaster or a bandage. The hook not only protects the flesh from the nail, but it exerts a lifting action on the nail. After a few hours the patient suffers no inconvenience from the hook, and in a few days the swelling subsides and the granulations become more healthy. It is well to wear the hook for several weeks after the tissues have healed.—*Medical Record.*

---

PATHOLOGICAL CONDITIONS OF THE PELVIS.—Dr. H. T. Hanks (*Americ. Gynec. Jour.*) concludes as follows with regard to the choice of operations in this class of cases:

If you are a well equipped surgeon, do a vaginal operation—a vaginal hysterectomy, in fact—when practicable.

1. For a suppurative pelvic disease, if located in the true pelvis, when exudation covers and agglutinates the uterus, tubes, ovaries and rectum.
2. For ovarian abscesses.
3. For an unruptured tubal pregnancy, and for a ruptured tubal pregnancy in the broad ligament.
4. For small ovarian and parovarian, movable cysts, and other small movable tumors.
5. For movable uteri, with small fibroids.
6. For carcinoma uteri when the uterus only is involved.

---

THE SUBCUTANEOUS INJECTION OF GUAIACOL CHLOROFORM.—*La Médecine Moderne* of March 10th, 1897, states that Colleville has employed hypodermically a solution of guaiacol and chloroform in the proportion of six parts to ten. This is to be injected directly into a painful point in the dose of from fifteen to thirty drops, and has proved itself peculiarly useful in the treatment of nerve pains such as sciatica. If as much as fifty minims are given, the injections are sometimes followed by induration, which, however, gradually disappears.

These injections are preferable to the morphine injections, and are to be preferred to rubbings and frictions.

---

TREATMENT OF SEXUAL ATONY IN THE FEMALE.—The *Journal de Médecine de Paris* gives the following prescription:

℞ Extract of cannabis indica,
Extract of nux vomica, of each 30 grains;
Aqueous extract of aloes, 7 grains;

Make into one hundred pills and take three a day.

# MEDICINE.

IN CHARGE OF

N. A. POWELL, M.D.,

Professor of Medical Jurisprudence and Lecturer on Clinical Surgery, Trinity Medical College; Surgeon to the Hospital for Sick Children, and to the Extern Department Toronto General Hospital; Professor of Surgery, Ontario Medical College for Women. 167 College St.; and

WILLIAM BRITTON, M.D., 17 Isabella Street.

## SCIENCE IN MEDICINE.

BY A. T. CABOT, A.M., M.D., BOSTON.

GENTLEMEN—I shall not enlarge on the fact that you are entering on a noble profession. That statement is often heard and has a good deal of truth in it; but the important thing for us to remember is that our profession is as noble, for each of us, as we ourselves make it, and no more so. It behooves us then to carry with us the resolve that we will do our utmost to sustain the high ideals of the past and to reach still greater heights in the future. In carrying out this purpose we shall have to turn often from the promptings of self-interest, and shall have to make sacrifices to our love of truth and to our sense of duty. Let us not be too vainglorious, however, over our sacrifices, for they are usually only such in seeming. Our voyages of discovery, like those of the old Spaniards, lead us often to where gold is to be had for the delving; and the medical man who devotes himself to the cause of science reaps his reward in this world in the added prestige and lustre which his attainments lend him. His light then so shines that men are attracted to him, and they see that he does not want.

This may seem a sordid consideration; and if it is allowed to be the mainspring of action, it, indeed, becomes so. There are many better and more inspiring inducements than this to incline right-minded men to scientific pursuits; but every prudent man must consider his own support and that of those dependent on him; and such a man may well feel encouraged to give time to seemingly unremunerative research if he believes that the knowledge and habits of thought which such research brings him will have a market value at some later date, and that the prestige of any good work that he may do will help him in his future career. A proper appreciation of these truths may encourage some of you to seek success by a devotion to science rather than by the pursuit of business. I venture to predict that few who are thus inclined will regret it.

It is about science in medicine that I wish to say a few words to you to-night, in the hope of emphasizing to you some of the gifts you have received from her and the duty you owe to her in return, and also with the desire of pointing out to you some of the ways in which you may serve her.

It is but as yesterday that medicine has become a hand-maiden of science and has escaped from the domain of inexact empiric art. So recent is this advance that the most important steps of it have occurred within the memory of one generation.

Do not understand me to belittle the achievements of past centuries, nor to imply that we have already reached the goal of exact knowledge towards which men have always been striving. But I do assert that in the past fifty years advancing medical knowledge has taken up more new ground than all of that occupied before, since our earliest authentic records.

How has this come about? Have the men of the last half of the nineteenth century been so much superior in intelligence to their fathers as to accomplish this? No! But their powers of research have been increased many hundredfold; and this advantage they owe to the physical laboratory, for it is the microscope which has revolutionized medicine and has made it possible for us to stand where we now do.

It enables us to see clearly where all was once dark groping, and to penetrate mysteries before which past ages have stood blind and uncomprehending. Let us not forget our gratitude to the physicists who have made this possible. They are busy people, these physicists, and their modern achievements have been so wonderful as to have almost exhausted our capacity for wonder.

A man sitting in his chair here in Cleveland talks with his friend in New York, and even recognizes that friend's voice over a thousand miles of wire. He reads each morning in his daily paper an epitome of what the human race has accomplished in the past twenty-four hours, a chronicle of the doings in the uttermost parts of the earth, and even shrewd suspicions of the happenings in some of the neighboring planets. Marvels which to a past generation would seem miracles are his daily bread, and he misses an accustomed stimulus if they are not constantly supplied and are not up to a high standard.

In an age of such enormous activity it is well to remember that our pioneers along the various roads of investigation have accomplished their results by concentration of effort and by the assertion of their own individuality. It is by the possession and exercise of these qualities that we must endeavor to carry forward their work. Every man must be more or less a specialist.

Even Bacon would hardly, at this time, claim all knowledge as his province; and we of lesser gifts must realize our limitations, and by attending strictly to labors that are within our strength, and by applying all of our powers to them, must endeavor to reach worthy results.

I do not use the term specialist as implying a narrow field. A man who practises surgery to the exclusion of general medicine is a specialist; and if his tastes and opportunities lead him especially into some branch, as gynecology or abdominal or orthopœdic surgery, he still further specializes his work. This I regard as the best way to approach a specialty: beginning with the general and working gradually more and more into special branches. In this way one is more liable to take a large grasp of his subject, and to acquire the habit of looking at his patient as a whole,

before allowing his attention to be drawn to the close study of a particular organ or region.

The various fields of study touch each other at so many points that we cannot occupy ourselves in one without coming in constant contact with those about. The surgeon studying a brain tumor requires the services of a neurologist, and perhaps of an ophthalmologist and aurist, before he can arrive at the best knowledge of the case. It is well that we should get the habit of thus using each other to help us to greater accuracy and efficiency. While travelling thus our own road, we shall get and give many a lift if we are so minded.

The generation now growing old has, in this country, been the one which has seen the various specialties of medical practice evolved. Fifty years ago the general practitioner was the rule, the specialist was the rare exception. I remember many of those old "family doctors," learned, sagacious, observant, friendly advisers and confidants, with an academic dignity which has been almost lost in the hurry and bustle and matter-of-fact directness of the last half-century. To follow one of these men through his daily rounds would be a curious experience to a modern specialist.

The first case, perhaps, would be a broken leg, then a pneumonia or dysentery, an ophthalmia, a middle-ear inflammation, a confinement, and a case of mania. To each of these various cases he would apply himself with trained powers of observation, often noticing and getting guidance from slight physical signs or movements of the patient which now pass unnoticed by the modern clinician. For the latter, with his instruments of precision, his clinical thermometer, his modern stethoscope, his stomach-tube, his specula, his blood count, and various other microscopical examinations, has more certain guides to a correct opinion, and does not need observation of the lighter straws to see which way the wind blows.

A student of to-day looking back at the generation of medical men who finished their work in the sixties is struck with the amount of empiricism that pervaded the best medical practice of those days. It was an empiricism not of choice but of necessity, for the field of vision was so limited for them that they had to do much blind groping among conditions but partly seen and imperfectly understood. The groper in the dark greatly sharpens his vision for what comes within the range of his sight, and it is surprising how many facts they discovered, the reasons for which were learned much later. Quinine, for instance, was given on correct principles in the treatment of intermittent fever long before the plasmodium was discovered; and subcutaneous tenotomy was put to valuable use for years before its immunity from harm was explained.

The discovery of vaccination and of surgical anesthesia are brilliant examples of the acute observation and the bold inductive reasoning with which the men of those days pushed out beyond the lines of safe navigation into the unknown, and brought back treasures from regions now somewhat explored, but then veritable *terra incognita* beset with dangers real and imaginary.

But a light was soon to break.

It was during this time that the foundation of modern medicine were being laid, not upon any therapeutic dogma, but upon the firm bed-rock of cellular pathology and bacteriology.

Gentlemen, we owe much to the European Continent, from which we all came; and not the least of our debts is to the laboratory system of Germany and France, in which this great medical revival of our day started.

In this country the facilities for scientific study and teaching were not then highly developed. Hospitals and laboratories were few, and the man wishing to pursue original investigations in the higher branches of medicine had to be first assured of an independent income; for salaried positions were scarce and the stipends were small.

Under the paternal governments of the Old World learning had secured more substantial appreciation and support. Great schools of medicine had grown up in the capitals and large cities of the European States, and the rivalry which existed among them had called into existence a great body of scientific workers striving for the high places and stimulated by the hope of advancement to put forth their best efforts along original lines. No man holding a professorship in Innsbrück was content to fold his hands and accept a routine of teaching if he felt within himself the ability and force to win a place in Munich or Vienna, and these places were to be won only by brilliant individual achievement.

Such was the system under which men like Virchow, Billroth, Cohnheim v. Recklinghausen and a host of others were reared. Under it they were encouraged to put forth their greatest strength in pushing their researches; they were stimulated by constant contact with other investigators working along the same or parallel lines. The very atmosphere in some of those old universities became so loaded with scientific impulses that to breathe it was an inspiration. The visitor there found himself acquiring habits of thought without knowing whence they came. Accustomed to well-trodden paths, he found himself seized with the irresistible impulse to plunge into hidden byways and to do some exploring for himself. Everyone seemed to have adopted the motto of the mongoose family as set forth by Kipling, "Run and find out."

If Americans of that day could not manufacture for themselves equally favorable conditions for study in this country, they knew at least where to find them; and the foreign clinics were filled with young men who had crossed the sea to put their guessing and calculating faculties under better guidance than they had been able to find at home.

And when these young men came back they came filled with a reverence for scientific methods and thought in medicine which could not and did not fail to make an impression in the communities in which they afterwards lived; and this leaven thus introduced into our country has worked, and to-day we see the awakened sentiment for higher medical education causing laboratories, workshops of science, to spring up in every direction, and to-day we are just getting into shape to take our place shoulder-to-shoulder with our older brothers abroad.

This growth of laboratories in America has been mainly accomplished by benefactions and gifts to learning from private citizens who have

shown their sagacity and intelligence—first, in the acquisition of wealth, and then in the wise disposal of a part of it, so that it may contribute to the highest public good. It is by a wide demonstration of the value of the best scientific teaching that the public interest will be so aroused that these gifts shall flow to our colleges in still greater abundance, and shall enable us to establish ourselves on an even higher plane of usefulness. Each of us may help the public towards this appreciation of the value of science in medicine somewhat by preaching, but still more by our practice. Fortunately the scientific exactitude of the laboratory has begun to bear fruit in the practice of medicine that everyone but the hopelessly color-blind can see. Every case of diphtheria saved by the judicious use of antitoxin is an object-lesson that cannot be overlooked.

The man who, in a case of difficult diagnosis, establishes the existence of malaria by the finding of the plasmodium in the blood, or of typhoid by the serum reaction, demonstrates the supremacy of scientific over empiric medicine and exerts a healthy influence on the minds of the surrounding community. Presently he will open their eyes to the immense importance of fostering a study which may have for them such beneficial results. Let us apply our shoulders to these wheels that they may move forward.

These are some of the ways in which, under our democratic form of government, we may properly influence the public purse to open to the cause of medical progress in America and to supply the sinews which will enable us to keep well up in the race. This is a generous rivalry. The ground gained becomes common property: no one can get ahead without pulling the rest along after him, and those that cannot pull must push.

But this educational effect which may be exerted on the community by a physician using exact scientific methods in his practice is an incidental public advantage, less important, as far as he individually is concerned, than the effects produced upon himself.

There is a constant force acting on the body medical, impelling it to seek easy running grooves, or, if you will, ruts. A busy practitioner adopts a routine to save himself thought and the expenditure of force. While he may, in the majority of cases, correctly diagnosticate the disease and properly treat it according to established methods, he cannot hope under such a plan to make any substantial improvement in his practice or to add anything to the knowledge of the diseases that come under his eye. Unusual cases do not arouse his interest, and rare diseases are unrecognized, or classed with some more common ailment which has somewhat similar symptoms. To such a man much of the pleasure of medical practice is wholly lost, the joy of discovery is to him unknown. Even though his practice embraces the whole range of medicine and surgery, he remains essentially narrow.

You will hear much of the narrowing effect of a specialty; and it is true that a specialty selected for business reasons, because there seems to be an opening in it, and pursued in this spirit, will have a narrowing effect. But a special line of work into which a man grows because he has a taste for it, and which he pursues in a scientific spirit, will lead him into far wider fields of thought than those which open before the routine general practitioner.

Therefore, I say to you that your profession will be satisfying and absorbing in proportion as you pursue it as a science and not as a business; and it is also true that the same course will lead you forward into the front ranks of those "practising physic."

It will happen to many of you to be so situated that time and opportunity are lacking for microscopical and chemical work, and this may seem an adequate excuse for relaxing the exactitude of your study. But it is not so, if, within accessible distance, you can find any one who can help you out and do some of this work for you.

A young man, fresh from the laboratories, can in this way be of the greatest assistance to his busier brother; and the older man by thus employing the junior gives him opportunity and stimulus for further research. The laboratories, too, are greatly aided by this constant demonstration of the value of their training. Perhaps in no branch of medicine is this kind of help more needed or of more value than in surgery; and I can use it best in illustration, for of it I am most competent to speak.

A surgeon approaches a doubtful tumor of the breast. If it is of benign character, it can be removed with comparatively little deformity, whereas if in any part of it a malignant change has commenced, the operation demanded is extensive, mutilating, involving not only the removal of the whole breast, and, perhaps, the underlying muscle, but also the dissection of the axilla and possibly of the supra-clavicular space.

For a wise decision in such a case as this, the prudent man requires the assistance of a trained microscopist versed in surgical pathology, who shall make careful search throughout the primary tumor, to determine the presence or absence of any malignant part in it. Such a search, to be of the greatest use to the patient, must be made on the spot at the time of the operation, so that the information gained may be put to immediate use in determining the extent of the operative procedure.

The patient has a right to demand such care in a matter which may be for her a question of life or death; for an operation done thoroughly on a malignant growth, so small that its detection is difficult, offers considerable chance of a lasting cure, while an incomplete operation done at that time may leave a commencing glandular infection untouched until too late. In other forms of malignant growth, a careful pathological supervision of the operation may detect the extension of the morbid process in unsuspected directions, and enable the surgeon's knife to circumscribe it by the removal of parts seemingly healthy, but in reality already infected.

Here is a field, then, in which surgeon and pathologist should work side by side; and the surgeon, by insisting on this co-operation, not only enhances the value of his own work, but also brings into due prominence the work of his scientific brother.

A slight consideration of the debt that surgery owes to bacteriology will make plain the importance of the daily employment of the bacteriologist in the study of our surgical cases.

The practical application of the germ theory to the combating of disease has reached more tangible results in surgery than in any other department of medicine. "So great an influence has this theory had upon

our successful practice that we are compelled to look upon the last quarter of the nineteenth century as the surgical golden age."

The discovery that the cause of inflammation in wounds is a preventable one has robbed surgery of the uncertainty and dangers that before prevailed, and has opened to the surgeon's knife regions and organs previously regarded as sacred. I well remember the time when an opening into the peritoneal cavity was regarded as a practically fatal accident, while now we open it without a thought of danger.

At present a knowledge of bacteriology enables the surgeon to test his antiseptic methods and his materials, and to thus keep a watch upon his technique, which is most necessary to his success. He also is often helped greatly in prognosis by an accurate knowledge of the organisms, which are responsible for an inflammatory process that he is dealing with.

Whether a further study of acute inflammations will enable us to attack a process already started with an appropriate antitoxic serum cannot now be predicted, but the success attained in diphtheria must make us hopeful, and should lead us all to give close study to our cases. Even if we cannot hope to ourselves contribute to the advance in this direction, we shall at least accustom ourselves to an accuracy of mind in considering inflammatory conditions which will prepare us for making prompt use of any discoveries made elsewhere.

The man who is in the habit of watching the streptococcus, the staphylococcus, the pneumococcus, and other microbes, and of studying their various effects upon his patients, will also put himself in a position to make immediate and intelligent use of any new method of treatment directed against one or other of these organisms.

In the recognition and study of tuberculous processes, the aid that the bacteriologist gives the surgeon is constant and valuable.

Whether future researches will put any of the malignant growths into the category of germ diseases cannot at present be told. There seems at least some reason for such a hope. Were this to prove true, the prophylaxis or cure of these dreaded conditions might be made possible. If such good fortune seems remotely possible, it is worth striving for with all the force that is in us, as it will only be reached by the combined work of the surgeon and the pathologist. Let every practising surgeon give what aid he can to the cause of scientific medicine, and so help towards this beneficent result. Who knows that we may not live to see cancer brought into the category of preventable diseases.

Any mention of the debts of surgery to laboratory research would be incomplete which stopped with an enumeration of the triumphs of the microscope, that gives us such insight into dead tissues, and enables us to read the histories within them, for we are still glowing with the enthusiasm awakened by the discoveries of Rontgen and his co-workers, who have taught the human eye to penetrate living tissues, and to see, as by the light of day, conditions heretofore concealed from us.

It is still too early to say how far-reaching the effect of this new power will be upon our surgical practice, but the results already obtained are of the greatest value, and the constant improvements in this method of research are opening up wider and wider fields of usefulness. It is

well to notice that this again is a benefic which, like the microscope, has been conferred upon the physician by the students of pure science, and is a capital illustration of the manner in which scientific workers in wholly different fields constantly come to each other's aid in ways quite unexpected. Such is the brotherhood of science.—*Boston Med. and Surg. Jour.*

---

## CHLOROFORM vs. ETHER.

Dr. Leonard Hill's paper on "The Causation of Chloroform Syncope," recently published in the *British Medical Journal*, is reviewed at length in the *Boston Med. and Surg. Jour.*, by Dr. B. E. Keefe, of Springfield, Mass. The reviewer presents certain conclusions which we reproduce, chiefly because they support views which have long influenced our own practice. First, that it is easy to teach a student or assistant how to give ether safely, but very difficult to do the same with chloroform; and secondly, that especially for the isolated practitioner to begin with chloroform by the drop method and to substitute ether as soon as the irritability of the respiratory mucous membrane is obtunded, is the best routine plan. It gives a sense of security unknown when the anæsthesia is continued by chloroform alone.—N.A.P.

(1) Statistics are at present of little or no value in deciding as to the relative danger of chloroform and ether, because, as I have shown in a previous paper, the deaths under both bear a lower ratio to the inhalations than the sudden deaths in those who had not taken an anæsthetic bear to the population.

(2) Ether is a safer anæsthetic in proportion as it is weaker, bearing a relation to chloroform of about one to five. The danger of chloroform is not so much inherent to it *per se* as to its relative greater strength and the greater care and experience required in its administration. I would trust almost any physician to give ether, but not one in twenty to administer chloroform. Just as any child can handle a toy engine, but not every man can handle a steam locomotive.

(3) The difficulties with both chloroform and ether in the pre-soporous stage are, in nearly all cases, due to respiratory spasm, and the consequent heightened arterial tension and venous congestion. This is very likely to be unduly prominent in the brain on account of recumbency, and the few muscular fibres in its vessels in comparison to the general circulatory system. For this reason it is neither so well able to resist the onset by contracting its arteries nor to empty itself.

(4) In the post-stertorous stage, after long application, the death is most likely to be caused by anemia and cardiac paralysis.

(5) The best medicine for the first kind of interference is amyl nitrite, belladonna and strychnia; and for the second, digitalis and strychnia, supplemented by electricity and all the other movements recommended by Dr. Hill.

(6) Were I asked for the greatest advantage ether has over chloroform I would say: The anæsthesia of ether is loud and lifelike; hence any accident or interference is noticeable on the instant; whereas chloroform

produces so quiet a sleep that the patient seems on the borderland of the grave, and there is not so distinct a warning of accident until too late; consequently it requires a degree of vigilance and attention that few possess. Moreover, the administrator, if conscientious, feels that he assumes a greater responsibility than the operator.

(7) Chloroform is a more satisfactory anæsthetic for short operations, where the sopor need not be renewed or continued; for obstetrics, where the anæsthesia need not be complete; and for patients with lung or kidney disease, and children.

(8) Ether is, I think, pleasanter and safer (for the vast majority of physicians) to continue the anæsthetic state after having been induced by chloroform.

(9) I do not believe there is any well-marked difference in the manner of death under ether or chloroform; the stage of the anæsthesia has more to do with it than the agent.

---

BRIGHT'S DISEASE.—In actual practice, were I to be limited to only one way of telling how my case of Bright's disease was getting on, I would be better informed, and my patient would be safer if I knew from day to day the total amount of urine excreted and its specific gravity, and never made a test for albumin, than if I watched the albumin from day to day, and failed to know accurately the quantity or specific gravity of the urine. Quantity and specific gravity together would tell me how my patient was. Albumin might tell me the condition of the kidneys or of a part of one kidney. The condition of my patient is the vital question. The condition of a little patch of one kidney may be of trifling importance. And it needs only a localized defect in one kidney to keep up a very persistent albuminuria.—DR. INGLIS, *American Med. Jour.*

---

REDUCED MORTALITY FROM PULMONARY TUBERCULOSIS.—Good effects have already begun to show themselves in New York City as a result of the compulsory notification of cases of pulmonary tuberculosis to the Board of Health. In a report to Mayor Strong, this Board declares as a result of three years' special effort to stamp out pulmonary tuberculosis that the disease is a distinctly preventable one; that it is not directly inherited; and that it is acquired by transmission from the sick to the healthy. Deaths due to pulmonary tuberculosis are now 30 per cent. less that they were twelve years ago. The Board recommends that the law should be amended so that all cases of pulmonary tuberculosis shall be reported to it; that rooms of a patient dying from the disease shall be disinfected; that special care be used in transporting tuberculous patients on railroads, steamers, etc. The general dissemination of a knowledge of the foregoing fact, in conjunction with an application of the principles of an enlightened hygienic, will do much not only to further diminish the mortality from tuberculosis but also to resist its general prevalence.—*Jour. Am. Med. Assoc'n.*

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

## NEURASTHENIA AND ITS RELATION TO OTHER DISEASES.

BY A. D. ROCKWELL, M.D., NEW YORK.

In that remarkable work, "The Art of Prolonging Life," written more than one hundred years ago, Hufeland speaks of imaginary conditions and morbid fears peculiar to hypochondriasis, which are brought on by brooding, reading works on medicine, excesses, etc. He evidently had seen cases of neurasthenia, although unconscious of their significance. Indeed, Arndt asserts that neurasthenia has been known for thousands of years. He, too, was unconscious of its significance, and both regard the fear and dread thus occasioned as imaginary, and would dissipate them by an effort of the will, not recognizing the fact that morbid fears are in the main dependent upon some vice of constitution, either autoinfection, due to malassimilation and imperfect oxidation of food products, or to mental and physical stress and strain that result in veritable cell exhaustion.

The will can do much, but it cannot do all; and in neurasthenic conditions as we commonly find them, the unaided will is a very unimportant factor. Impairment of will, indeed, as has been well said, "is the keynote to the psychic state in neurasthenia." One cannot use what one has not, and the will power that emanates from an exhausted brain is so insignificant that the slightest obstacle becomes insurmountable.

To tell a man with profound neurasthenic symptoms that he is all right, that there is really little the matter with him, and that all he needs is to "brace up" and not give way to unnecessary and unreal emotions and sensations, is very much like attempting to persuade a man on his way to the gallows that there is nothing real or disturbing about his situation. I do not know to what extent the general practitioner sees and recognizes these cases, but experience teaches me that he sometimes inflicts injury that is neither light nor easily effaced, by giving no heed to or misinterpreting a tale of woe because he fails to detect objective symptoms of disease. Gowers, in his masterly work on nervous diseases, devotes fifteen hundred pages to the elucidation of the symptoms, morbid anatomy, and pathology of a host of structural and organic diseases, for which little or nothing can be done in the way of treatment. He devotes less than a page to a condition that occasions far more misery and paralysis of utility than many a hopelessly incurable organic lesion, and for

which very much can be done in the way of successful treatment. Perhaps no greater misconception of the true state of mind and body of a typical neurasthenic can be found than when he says: "To describe the symptoms and treatment of all that may be collected under the name neurasthenia would be to repeat that which has been stated already in its proper place [in his book], especially in the sections on neuralgia, headache, cephalic sensations, hysteria, and hypochondriasis."

These conditions, one and all, are simply shifting symptoms of the neurasthenic state, and in its treatment they deserve no more consideration than the multifarious symptoms that are associated with any grave constitutional disturbance.

Since the term neurasthenia with its peculiar congeries of symptoms had its origin in this country through the labors of Beard, and has even been called the American disease, it is with no little satisfaction that those of us who have earnestly contended that it should hold a distinct position among diseases note that many of the keenest observers in neurology, both here and abroad, in Germany and France, are fully alive to its importance and reality. Bouveret believes that neurasthenia should be attributed to a disturbance of the nutrition of the nervous elements, to an impoverishment of the nervous force, and especially to a chronic enfeeblement of the superior nervous centres which regulate the activity of the inferior centres. The exaggerated action of the brain in the sphere of the intellectual faculties is the most common and best-established cause of nervous prostration. It is common also from the abuse of stimulants, from excessive muscular exercise, and from sexual excesses.

Benedict considers neurasthenia as a psychical condition excited by psychical emotion and intellectual overwork; claims that psychical treatment is equally important, and that the moral cure has been of late neglected, although he is distinctly sceptical as to the cure of all ills by suggestive treatment. The important question is whether to permit the neurasthenic to work or to demand absolute rest. Strictly absolute rest, however, increases the affection, and the patient should always be led to occupy himself in a suitable manner. He thinks isolation or removal from one's family or surroundings is often essential. He claims that if the Americans would learn from the Germans how to amuse themselves instead of yawning on holidays, the danger of neurasthenia would be diminished. Whoever has not learned how to play and jest, easily succumbs to mental work. He lays especial stress upon electricity; and for drugs, upon iron and arsenic.

Blocq considers neurasthenia as a neurosis, which in every case has its seat in the brain.

The list of other foreign writers, whose words are based on the authority of long and tried experience, and who are fully alive to the reality and importance of this disease which has ruined so many lives, includes Champagnac, who does not accept the nervous theory of Beard, but believes neurasthenia to be closely related to alteration in the digestive tract; Fournier, who is surprised that syphilis has been so little considered as a cause of neurasthenia; Savage, of London, who regards neur-

asthenia as a disturbance of the peripheral nervous system analogous to general paralysis; Vigouroux, of Paris, who believes the important etiological factor to be over-activity of the organic centres and the diminution of nutritive metabolism; Lowenfeld, who endeavors to reconcile neurasthenia with the uric-acid diathesis; Grasset, who attributes all neurasthenias to over-work of every kind; Joseph, of Landeck, who in studying the etiology or neurasthenia admits that it is generally caused by whatever enfeebles the human organization by prolonged action; and Kowalewsky, who considers that when the nervous system does an excessive amount of work, sufficient nutritive material is not brought to the centres of activity, and, furthermore, by the continuance of their activity the waste products are not carried away as speedily as they should be. This leads on the one hand to malnutrition, and on the other to intoxication from the waste products. In certain conditions, however, he holds to Arndt's theory that many of the cell elements in the nervous system of some patients show a defective development. In such cases neurasthenia is more clearly a congenital condition, and is, of course, much more easily developed. Bordarie advances a similar theory, basing the condition upon a vasomotor disturbance and excitation of the vasomotor centres, leading to a diminished nutrition and a consecutive intoxication: while Dujardin-Beaumetz and others discuss the frequency of dilatation of the stomach in neurasthenia, and advise local treatment as in dilatation from other causes.

These views comprise but a small part of the literature of neurasthenia, and I quote them to show that, however much men may differ in the minor details of its nature, its causation or its treatment, it would seem useless to contend, as Gowers has done, that neurasthenia cannot be regarded as a distinct disease, or that the symptoms of every so-called neurasthenic patient are sufficiently definite in character to bring the case into some special category of other well-known diseases. For purposes of rational treatment, however, it does become necessary to differentiate between true neurasthenia and pseudo-neurasthenia, a condition quite different, and one which some of the authorities just quoted evidently confounded with the classical disease. My meaning cannot, perhaps, be better conveyed than by reiterating what I have said in another place: "Neurasthenia is now almost a household word, and equally with the term malaria affords to the profession a convenient refuge when perplexed at the recital of a multitude of symptoms seemingly without logical connection or adequate cause. The diagnosis of neurasthenia, moreover, is often as satisfactory to the patient as it is easy to the physician, and by no means helps to reduce the number who have been duly certified to as neurasthenic, and who ever after, with an air too conscious to be concealed, allude to themselves as victims of nervous exhaustion. The doctrine to be taught and strongly enforced is that many of these patients are not neurasthenic, and under hardly any conceivable circumstances could they become neurasthenic. They do not belong to the type out of which neurasthenia is born, either mentally or physically. Many of them are unintellectual, phlegmatic, and intolerably indolent, and are pleased at a diagnosis which touches the nerves rather than the stomach,

bowels, and liver. The treatment needed is quite different from that of the true neurasthenic. These patients are lithæmic, not neurasthenic; the nervous system is strong enough, and would give no trouble were it not poisoned by the abnormal products of digestion, that enter the blood and circulate through every tissue of the body."

It is this lithæmic condition, so often mistaken for neurasthenia, of which Haig has been one of the later exponents. He dwells upon the importance of the retention of uric acid in the system in the causation of nervous disorders. These disorders, however, are in no sense neurasthenia. They consist, as Murchison had pointed out before him, of headache, vertigo, convulsions, depression, irritability, sleeplessness, pains and neuralgia, migraine and paralysis. According to his idea, those who indulge freely in meat and wine, and take of any food more than the system can oxidize, have a tendency to store up uric acid in the system.

Leubucher has studied many cases of nervous diseases, melancholia, and mania especially, and it was surprising how in most of these cases an examination of the secretions showed greatly increased acidity. Now it is an extremely easy matter, as a rule, to diagnosticate a functional discase of the nervous system from an organic disease; but it is not always so simple a matter to diagnosticate a neurotic condition, dependent upon retained uric acid or faulty metabolism in any way, from a condition of true neurasthenia. The presence of uric acid does not determine the difference, since uric acid is not infrequently found in the urine of neurasthenics, while the worst lithæmic may at times give no evidence of its presence. Differential points of importance refer to the mental phenomena. Mental depression and a profound sense of misery belong to both types, but with very different manifestations. The neurasthenic, however much he may suffer in mind, and however much he may worry in regard to his own condition and the affairs of the world generally, has no such irritable, ungovernable temper as the lithæmic.

In neurasthenia, the nutrition of the nerve cells is believed to be at fault. They are in a condition of pathologic fatigue, brought about by voluntary or involuntary stimulation of brain activity, frequently repeated to the verge of exhaustion, until the recuperative power fails to bring back the nervous tone to its normal level.

Suffering in this way, the demeanor of the neurasthenic is, as a rule, quiet and suppressed. He is timid and retiring, and one seldom sees in him the touchy mood of the lithæmic, whose brain is actually poisoned by the imperfectly transformed products of digestion. In lithæmia the tongue is generally coated, and where you will find one neurasthenic with cold hands and feet, you will find a dozen lithæmics bitterly complaining of this condition. The nitrogenized wastes circulating in the blood cause by their irritation tonic spasm of the arterioles and local anæmia.

No two conditions of disease, with such similar symptoms in many ways, demand such widely different methods of treatment.

Haig would remove the uric acid by salicylates and acids, and prevent the formation of more uric acid by an appropriate diet. The necessity is not for rest, or quiet, or soothing draughts, but for mental and physical activity, and sometimes actual starvation.

The neurasthenic, on the contrary, frequently needs more food and of the best quality—repletion rather than depletion. He may need absolute rest and quiet or at least an entire change in the character of his work, and whatever methods tend to improve nutrition must be persistently attempted.

I have had cases in which absolute rest in bed, as advocated by Weir Mitchell, has been of service; but in the great majority of cases the monotony of complete rest acts as an irritant rather than as a tonic sedative. Activity along some line, tempered to the characteristics and necessities of the patient, is far more potent for good than absolute idleness, while a judicious use of a combination of the three bromides, with some one of the zinc preparations and cannabis indica, is perhaps the most efficient form of internal medication. These drugs are not tissue builders, nor are they tonics in the ordinary acceptation of the term, but they temporarily curb the erratic and unstable nervous system, and enable it to receive with better effect those methods of electric application which experience has proven to be so valuable as an aid to animal nutrition.

In regard to the use of electricity in neurasthenia, there is much to be said, and, if time permitted, I should be glad to consider at length the *rationale* of its effects.

The fundamental principle underlying all the reconstructive and curative effects of electrization is its power over nutrition. The neurasthenic patient looks so well, is frequently so plump and healthful in appearance, that we are accustomed to say that he is well nourished, that his nutrition is good. This, however, cannot be. The morbid fears, the strange and persistent sensory symptoms, the vacillation, the feeble powers of endurance—all point to deficient nutritive activity; and whether we regard the pathologic change in the cell to be due to fatigue, to inanition, or to direct toxic influence, the processes of metabolism are undoubtedly defective, both in constructive and destructive power. Few facts are more clearly established than the influence of electricity, first upon the metabolic function of the body, and secondarily over nutrition. Through physiologic experiment and chemical analysis, we know of its effects upon metabolism; through clinical experience and observation upon nutrition. Every manifestation of electricity possesses this power in greater or less degree, and it is most unwise, it seems to me, to select and dwell upon any one form as the special medium through which nutritive effects are best obtained.

It is through the mechanic, chemic, and physiological powers of electricity that we influence nutrition, and that form and method of treatment which in the most thorough manner combines these effects, as indicated in individual cases, will prove the most effective.

The relation of the morbid fears of neurasthenia to other diseases, and especially to epilepsy, is of great interest. Many a neurasthenic will appear to be on the verge of an epileptic attack, and it is not uncommon for them to think that they are about to have it; but, as a rule, their very disease saves them from it. Nevertheless, although the two diseases, epilepsy and neurasthenia, evidently belong to different orders

of constitution, yet in a number of cases that have come under my observation I have found an epileptic attack and morbid fears to be convertible terms. I well remember the case which first called my attention strongly to this fact. A young man, aged twenty-four, came to me, some years ago, complaining of symptoms that had become chronic, typical of true neurasthenia. His morbid fears took the form of monophobia—fear of being alone. He seemed to be afraid of nothing else, but rather than sleep alone, or remain in a room alone, he would sit up all night or walk the streets for hours. He had never suffered from any form of convulsive seizure, but shortly after he came under my observation he was seized with an epileptic paroxysm of considerable severity, which was repeated every few weeks for more than six months; but the morbid fears left him at once and completely. When the epileptic attacks began to decrease in severity the morbid fears began to return, mildly at first, but increasing in severity as the epileptic attacks subsided. Evidently the same pathological condition, whatever that condition was, that caused the morbid fears was the cause also of the epileptic seizures. The practical point that I desire to make in regard to this occasional combination or alternation of two very distressing symptoms relates to the treatment. The epilepsy associated with neurasthenia is a different and less grievous affair than when due to reflex irritation from central traumatic causes, to organic brain disease, or the ordinary so-called idiopathic variety. In most cases of epilepsy from these causes the "fits" act as safety-valves, the secondary effects of which are a general mental and physical uplift; but in cases of what might be termed neurasthenic epilepsy the attacks are not followed by the same measure of relief. The prognosis, however, in neurasthenic epilepsy is far better than in epilepsy unassociated with the neurasthenic condition.

In the latter case, the bromides are unmistakably beneficial, and sometimes curative, and are not, as a rule, distinctly harmful; but in the epilepsy that displaces the morbid fears of neurasthenia bromides are, in my experience, less serviceable and more depressant.

For this reason, in those cases of neurasthenic epilepsy that come under my observation I am much more careful in the use of the bromides, and, indeed, treat the cases constitutionally, very much as neurasthenia itself is treated, by those methods that tend to aid cellular nutrition, and especially by central galvanization—than which there is no more efficient method in the treatment of chronic functional derangement of the central nervous system.

My experience does not teach me that syphilis bears any very important relation to neurasthenia, as suggested by Fournier. It may occasionally complicate it, but the great majority of my own cases had never contracte l the disease. It is unquestionably true that nervous exhaustion saves from disease. Those afflicted with it are, for example, less liable to inflammatory conditions. Their gonorrhœal attacks are lighter, and I have seen enough of syphilitic attacks in neurasthenics to incline to the belief that both local and constitutional effects are less severe than in the perfectly well.

Organic diseases of the brain and spinal cord, or of the peripheral

nerves, are very insignificantly related to neurasthenia in any real sense.

Very few neurasthenics develop structural disease, and it is rare to see the latter associated with the symptoms of true neurasthenia; but the tendency to mistake one for the other, although not so prevalent as formerly, is by no means rare.

Deficient mental control, sensory symptoms, and local fibrillary contractions are the symptoms which, according to my experience, cause the greatest alarm to the intelligent patient. If the patient be a physician, or one who has made himself familiar with the symptoms of central organic disease, the deficient mental control suggests to him insanity, the sensory symptoms locomotor ataxia, and the fibrillary contractions progressive muscular atrophy. The importance of a correct diagnosis cannot be overestimated. The gravest consequences may follow such mistakes, and it would seem that no adequate excuse can be offered for them. To mistake an organic for a functional condition is not, as a rule, so serious a matter. It is, indeed, sometimes desirable to keep for a time the worst from a patient; but to tell one afflicted only functionally that his disease is organic and incurable is a most serious matter. It takes away hope, shatters the *morale*, and materially lessens the chance of ultimate recovery.—*Medical Record.*

---

Headache from Ovarian Disease.—

Ammonium bromide, 6 drachms.
Fluid extract golden-seal, 4 drachms.
Tincture gentian comp., 12 drachms.
Water, 4 drachms.

A dessertspoonful three times daily.—*Medical News.*

---

Chorea.—I have confidence in only three remedies, giving preference in order enumerated: Absolute rest, avoiding any external excitation whatever, and keeping the choreic in a dark or darkened room: The ascending electric current along the spinal cord—the best results with a gentle current, progressively increased: Arsenic in large doses, beginning with twenty-one drops Fowler's solution daily for children, and double the quantity for adults—even after the chorea ceases the remedy should be continued for some time, for the malady readily returns.

Of course nutrition should be maintained, with good food; and gymnastics may also prove useful.—Renzi.

---

Irritable Bladder.—

℞ Salol, 2 drachms.
Tincture hyoscyamus, 2 drachms.
Infusion of buchu, enough to make 6 ounces.

A tablespoonful three times a day.—W. E. Fothergill.

---

Chronic Leucorrhœa.—The best constitutional remedy is arsenic in small doses.—Thomas More Madden.

# NOSE AND THROAT.

IN CHARGE OF

J. MURRAY McFARLANE, M.D.,
Laryngologist to St. Michael's Hospital. 32 Carlton Street.

D. J. GIBB WISHART, B.A., M.D.C.M., L.R.C.P.L.
Professor of Laryngology, etc., Ontario Medical College for Women; Lecturer in Laryngology and Rhinology, Trinity Medical College; Rhinologist and Laryngologist to the Hospital for Sick Children, St. Michael's Hospital, and the Girl's Home; Toronto General Hospital 47 Grosvenor Street.

## TREATMENT OF NASO-PHARYNGEAL CATARRH.

BY WALTER F. CHAPPELL, M.D., M.R.C.S., ENG.

Surgeon to the Throat and Nose Department, Manhattan Eye and Ear Hospital, New York.

The treatment of catarrhal affections of the throat and nose by what may be termed minor surgical measures, was given little attention until recently. At present there seems to be a disposition to rely too much on these methods to the exclusion of other means which are equally essential. To obtain the best results, different kinds of naso-pharyngeal catarrh must be recognized, and the treatment selected accordingly.

Naso-pharyngeal catarrh, depending on nasal obstructions and pharyngeal hypertrophies of various kinds, may be treated by surgical methods with excellent results. There are two other causes of catarrhal discharge from the upper respiratory tract which are not so amenable to treatment —one depending on constitutional dyscrasias, which are hereditary, and the other acquired and resulting from some form of disturbance in the digestive tract.

Of the hereditary causes, syphilis, tuberculosis and the rheumatic diathesis head the list.

Persons suffering from congenital syphilitic naso-pharyngeal catarrh are easily recognized, as they have other symptoms which point directly to the nature of their trouble. A complete cure cannot be expected in these cases, but much may be done to hold the offensive discharge in abeyance. Internal medication is most important, and the administration of the liquor arsenici et hydrargyri iodidi will prove very satisfactory. It may be given in small doses, say 3 minims in distilled water three times a day after meals, and kept up for several months. It rarely disagrees, but should it cause derangement of the bowels or fulness of the head, a smaller dose may be given. Locally, any of the usually recommended solutions may be used for cleansing purposes, and a powder applied of zinci stearas comp. cum ichthyol. This powder is stimulating

and antiseptic, and owing to its low specific gravity, a small quantity covers a large area. It is also very adhesive, and it is impenetrable to aqueous fluids; it does not cake, and is not carried away by the secretions. The ichthyol in the zinc stearate comp. may be replaced by resorcin or balsam of tolu.

Catarrhal discharges, from a strumous or tubercular diathesis, begin about the age of puberty. The discharge is thick and yellow, and comes chiefly from the nasal fossæ and post-nasal space. The mucous membrane is pale and tightly drawn over the underlying bony structures, and covered with a thick, semi-transparent discharge. Patients suffering from this form of naso-pharyngeal catarrh almost universally have facial acne indurata, which scars them for years. The mucous glands on the inferior turbinated bodies are sometimes large and red, bearing a strong resemblance to the acne on the face. It usually occurs in several members of the same family. Immediate results of a palliative nature may be expected from well-directed treatment, but time alone will do a great deal for this catarrh and its accompanying acne. The treatment should be to increase the fatty tissues and build up the general health. Plenty of cod-liver oil and outdoor exercise should be advised. The usual cleansing agents may be used for removing the secretions; the douche is preferable to sprays, when the accumulation is abundant and dry. Dessar's nasal cup is a convenient method of carrying out this treatment, but a douche, arranged on the principle of a fountain syringe, gives better results. The reservoir should hold only a pint, and hang about six inches above the patient's head. The rubber tube and nasal tip should be about three feet long. The following rules may be given to the patient when using the douche:

1. Warm the fluid to be used, and apply vaseline to the nasal tip.
2. Put the nasal tip in the nostril of the side you can breathe best through.
3. Hold the breath, throw the head slightly back, and allow the fluid to enter the nose.
4. If there is a desire to breathe, take the nasal tip away for a few moments, and begin again.
5. While using the nasal douche, do not attempt to walk, cough, swallow, sneeze, or become excited in any way.

When the catarrhal symptoms are the result of a rheumatic diathesis, the mucous membrane of the nasal fossæ and naso-pharynx is of a deep red color, not specially hypertrophied, and the discharge is mostly watery and frothy in character. These persons are, at all times, very sensitive to dust, winds, change of temperature, etc., and when they take cold the nasal discharge is great, and keeps up for a long time. There will be intervals when the catarrhal symptoms are in abeyance, and then suddenly appear without any apparent reason, but, on further examination, the urine will be found highly acid, and with an increased specific gravity. Sprays and douches are positively contra-indicated in these cases, and it is a question if any local application is of service.

Thin ointments have seemed to allay the acute symptoms in some cases. For this purpose the following may be used:

℞.—Acid. carbolic ..... grs. ij
Camphor ..... grs. iij
Ol. gaultheriæ ..... min. iij
Benzoinol ..... ʒss
Ung. oxidi zinc ..... ad. ʒj

M.—Sig.: Apply in the nostrils two or three times a day, with a camel's hair brush.

Internal medication gives the best results. To temporarily check the discharge, small doses of ext. belladonna, quinia sulph. and camphor, in capsule form, prove very satisfactory, but anti-rheumatics must also be employed.

Chronic pharyngeal catarrh, resulting from digestive troubles, is the most frequent form observed in this country. Adults are the principal sufferers. There is considerable discharge, varying in character, and with little or no odor. A full feeling behind the palate and around the base of the tongue is a constant symptom, as is also a sensation of something running from that region. The desire to clear the throat, especially when speaking, or after excitement or meals, is very troublesome.

No amount of hemming or clearing the throat seems to relieve these cases. Two classes of persons suffer from digestive difficulties which cause catarrhal affections. One class, of full habit, eat a great deal, and keep the whole digestive tract engorged, liver congested, and a general sluggish condition of the intestinal circulation.

The mucous membrane of the pharynx in this class is more or less congested, and bathed in a watery, frothy mucus The vessels and glandular tissues of the pharynx, and around the base of the tongue, are much enlarged and engorged to a more or less degree. The glandular tissue at the base of the tongue varies much in appearance; in some it is nodular, while in others it occurs in large masses which encircle the epiglottis. The varicose condition of the lingual veins and the hypertrophy of the glands have been called "lingual hæmorrhoids;" and they certainly have a close affiliation with rectal hæmorrhoids—not alone resembling them in appearance, but frequently result from the same cause, produce similar symptoms, and respond to the same treatment.

The other class of digestive catarrhal affections develops in persons suffering from dyspepsia of nervous origin. The mucous membrane of the pharynx and the condition of the neighboring parts is pale, and bathed in mucus, due to the sluggish condition of the circulation of the pharynx, œsophagus and stomach.

In the treatment of the first class of the digestive cases the diet should be regulated, and liquids of all kinds taken in moderation; saline purgatives relieve the congested circulation; walking, exercise and daily baths, or rubbing with a coarse towel, also assist. Washing out the stomach, by the usual method, gets rid of the excess of mucus, and produces more rapid and complete digestion. The patient should be taught to wash out the stomach every morning before breakfast. At first, considerable gagging will be experienced, but a little perseverance overcomes this.

Various methods have been suggested for reducing the hypertrophied glandular tissue, and all are more or less efficient. In my experience,

the best uniform results are obtained by the application of a saturated solution of pure iodine and carbolic acid, consisting of iodine and carbolic acid crystals, each 120 grains; iodide of potash, 10 grains; rectified spirits, 2 drachms. This solution applied to the glands on the posterior pharyngeal wall and the base of the tongue, once a week, causes no pain or soreness; at the same time it produces a change in the glandular tissue, which is unequalled by any other application in my experience.

The dropping of mucus from behind the soft palate is considerable in all forms of catarrhal affections, and for general use in stopping this disagreeable symptom, a powder containing nitrate of silver, in varying proportions, as first suggested by Dr. A. H. Smith, will prove most effectual. The formation of this powder, as described by Dr. Smith, is well worth our consideration.

In ordering a powder that shall contain a certain proportion of silver nitrate, it is necessary to select a diluent that will not decompose the silver salt. This condition at once excludes all powders of organic origin, and also all carbonates of the alkalies or alkaline earths. Of the powders remaining, we must select one that will be bland and unirritating to the tissues, and not disagreeable to the taste. Bismuth sub-nitrate at once suggests itself, and it serves an excellent purpose until it has been exposed for a while to the air, when it becomes damp and lumpy. It needs, therefore, the addition of a small amount of some powder that will not absorb moisture, and that will separate the particles of bismuth. Potassium sulphate fulfils these conditions, and as both base and acid are stronger than in the silver salt, no decomposition results. The sulphate is neutral in re-action, and not irritating to the mucous surfaces.

A powder composed as follows will not change chemically, will not become lumpy, will not cause irritation, other than that from the silver, and is not offensive to the taste:

R.—Argenti nit.....gr. x-xl
Potass. sulph.....℥j
Bis. subnit.....℥vij
M.—Sig.: For local use.

—Dr. Walter F. Chappell, in *Virginia Medical Monthly.*

## A NASAL CUTTING FORCEPS.

BY JOHN C. LESTER, A.M., M.D., BROOKLYN.

A more or less extended experience in the removal of portions of the middle turbinated body by means of the nasal snare, and an occasional failure with this method, led the writer to look for an instrument which could be relied upon in an emergency. An instrument, devised by Dr. Robert F. Weir, of New York, was found, which, in the hands of the writer, has proved particularly useful.

The instrument, represented in the drawing, is a modification of Dr. Weir's nasal forceps. The modifications consist in the fenestrated cut-

ting ends, their increased size, and the enlarged angular handle. Dr. Weir's forceps, it will be remembered, consists of a straight, narrow scissors handle, which completely obstructs the view of the operator.

The increased size and depth of the cutting ends of the modified forceps, the fenestrations, and the strength of the handle, make it possible for the surgeon to remove the entire middle turbinated body, or any portion of it, with an entirely unobstructed view of the field of operation.

The writer has also found this forceps exceedingly valuable in removing large nasal polypi, especially those attached to the middle turbinated body. In these cases it has been possible to remove not only the polypi, but also that portion of the turbinated bone to which the polypi are attached.

This instrument is not intended to supplant the use of the nasal snare; for, in the judgment of the writer, although there is no method which requires a greater amount of skill and dexterity on the part of the surgeon, there is certainly no method accompanied with more satisfactory results than the use of the ordinary nasal snare in the removal of a hypertrophied middle turbinated bone. There are, however, cases of sclerosed middle turbinated bodies which, having ran the gauntlet of the "scorching" process, are still a source of discomfort to the patient. It is in this class of cases that a device of the kind under discussion is valuable.

Of course, an instrument so powerful must be used with extreme caution to avoid undue laceration of the tissues, as well as the removal of a greater portion of the turbinated body than may be desirable. The exercise of ordinary care will, however, obviate any such untoward result.

The forceps is made by Messrs. Tiemann & Co., of New York, and is up to their usual standard of excellence.

---

WHEN SHALL WE USE THE FORCEPS?—Wm. E. Parke (*Am. Gyn. and Obstr. Jr.*, Feb., 1897), in a practical paper relating to the above question, presents the following summary:

1. The indication for the use of the forceps rarely arises during the first stage of labor, before the membranes have been ruptured.

2. It may be necessary to employ the forceps during the first stage, when the waters have escaped, on account of the increasing exhaustion of the mother or child.

3. It is proper to apply the forceps during the first stage of labor for accidents, whenever they may arise, notably in certain cases of convulsions, placenta previa and prolapse of the cord.

4. In the second stage it is proper to apply the forceps one-half hour after the head ceases to advance, when there is no disproportion between the passage and the passenger.

5. When, however, there is a tight fit between the child and the birth-canal, the use of the forceps may be delayed. This delay should rarely exceed two hours after the head ceases to advance.

6. If the head is engaged, and neither advances with a pain nor recedes after the pain, the forceps should be applied promptly.

# PAEDIATRICS.

IN CHARGE OF

ALLEN M. BAINES, M.D., C.M.

Physician, Victoria Hospital for Sick Children; Physician, Out-door Department Toronto General Hospital. 194 Simcoe Street, and

J. T. FOTHERINGHAM, B.A., M.B., M.D., C.M.,

Physician, St. Michael's Hospital; Physician, Outdoor Department Toronto General Hospital; Physician, Hospital for Sick Children. 39 Carlton Street.

## WHERE DOES THE MEDICAL PROFESSION STAND TO-DAY UPON THE QUESTION OF INFANT FEEDING?

BY L. EMMETT HOLT, M.D.,

Professor of Diseases of Children in the New York Polyclinic.

It is safe to say that at the present time there is no subject in pediatrics of greater interest and importance than that of infant feeding. It is only within the last decade that this subject has received anything like the attention in medical literature which its practical importance deserves. Until recent years it has been ignored by the physician and left largely to nurses and grandmothers. There are now signs everywhere that infant feeding is becoming a subject of scientific study. During the past few years an extensive literature upon the subject has appeared, particularly in Germany and in America, representing a large amount of clinical observation and laboratory study. It is the purpose of the present article to take a hasty survey of the question as it is regarded to-day.

By infant feeding is usually meant the nourishment, during the first year, of infants who are deprived of the maternal breast. The subject of wet-nursing will not be considered further than to remark that while, in the great majority of cases, wet-nurses are not required, they are sometimes indispensable.

The forms of infant feeding which are practised to-day may be reduced to three:

1. The exclusive use of commercial foods, or of canned condensed milk.

2. The use of fresh cow's milk with the addition of various foods or substances which are believed to modify the milk so as to increase its digestibility, particularly as regards the casein.

3. The use of only the elements of cow's milk, either with or without some form of sterilization. Cow's milk may be modified by simply diluting with water, or also by the addition of sugar; or more complex changes may be made, such as the various combinations of milk, cream, milk sugar, etc., and these mixtures, or plain or diluted milk, may be employed with or without some form of sterilization.

While there are many points which remain to be settled by future study, it is to the third position that the great majority of those who have come who are qualified by training and experience to speak upon this subject. There are, in fact, few questions in pediatrics upon which such unanimity of opinion exists as that fresh cow's milk is the best infant food, and that to depend upon anything else as a permanent food is to hazard the child's life.

Let us look at some of the reasons for this. It is assuredly not from any mere prejudice that canned condensed milk and the commercial infant foods have been given up by intelligent physicians as substitutes for breast feeding; but simply because experience has shown the dangers which lurk in them and the objections to which they are open. Infant feeding is a problem in nutrition, and the success of any method is to be judged by its ultimate results; for the immediate results with these foods are not infrequently most satisfactory and delightful. As an illustration, take the case of an infant who has been fed upon cow's milk not properly adapted by modification to its digestion. How often does one see as a result of such feeding continued fretfulness and discomfort, often attacks of severe colic, and the passages of stools containing large, hard curds. At this juncture the substitution of some commercial food may be followed by the almost immediate disappearance of the uncomfortable symptoms just mentioned. The experiment is often interpreted by the mother, and sometimes by the physician, to mean that cow's milk is not a suitable food, while one has been found in the commercial article which exactly meets the case.

But suppose that this food is now continued as the sole diet for several months, and what follows? The prolonged and exclusive use of such a diet reveals its fatal lack of some of the essential elements of food required by the growing infant, which are supplied by fresh milk and by nothing else. It may be three months, and it may be six months, before the effects of this are seen, but they come with great regularity, sometimes in the form of scurvy or rickets; sometimes as a general malnutrition; as a consequence of which there is so feeble a resistance that any acute disturbance may prove serious, or it may lay the foundation for delicate health during all childhood.

Within the past two years upwards of twenty cases of infantile scurvy have come under my observation, these being, almost without exception, seen in children whose principal or sole diet consisted of some one of the commercial foods. Said one very intelligent father, whose child was found to be suffering from a severe form of that disease, when the etiology of the scurvy was explained to him: "Why are not these facts published, so that not only the few physicians who have special opportunities, but the medical profession generally and the public may be made aware of these dangers and so avoid them?" He could scarcely credit the statement that a large number of such cases had been placed on record, and also that the commercial foods did not have the endorsement of the most intelligent portion of the profession.

Again, take the case of canned condensed milk. This is still widely used by the laity in the country as well as the city, and, I am sorry to

say, is advised by many practising physicians. During the past five or six years I have been in the habit of examining critically all children with reference to the effects of the prolonged use of various forms of diet, and I have yet to see an infant reared solely on canned condensed milk who did not exhibit the signs of rickets to a greater or less degree, though a few would have passed at first glance as particularly healthy specimens. The feeble resistance of condensed-milk babies to acute disease has long been noted by many observers.

The objection to those commercial foods which require in their preparation the addition of fresh cow's milk is not so serious as to the group just considered. Some of these foods, consisting largely of soluble carbohydrates, may supply the additional amount needed by cow's milk when it is used for an infant food. But that they do more is, I believe, not true; and until further evidence is adduced than at present exists, they cannot be regarded as modifying the casein of cow's milk, or increasing its digestibility. For routine use they are not to be compared with milk sugar, as used in ordinary milk modification.

Those foods which contain a large amount of unchanged starch are successful in the inverse proportion to the amount used. They serve a useful purpose as diluents of the milk and do not affect the nutrition in one way or the other.

The foods of this class are successful because of the fresh cow's milk which is used in their preparation, especially if the method of preparation secures a proper dilution for the casein of the cow's milk.

The addition of digestive ferments to milk, with the purpose of assisting the infant by a partial predigestion of the casein, is at times extremely useful. It should not, however, be continued indefinitely, or the stomach will not acquire the capacity of doing this work. As a routine method of feeding it is greatly inferior to the proper modification of the elements of cow's milk.

We come, then, to this final proposition, to which all students of the subject of infant feeding agree, viz, that no artificially-fed infant can safely be kept upon any permanent diet which does not contain fresh cow's milk. As temporary substitutes the commercial foods may at times be admissible, but their use should go no further.

While we must depend upon milk, and practically upon cow's milk, and are not upon safe ground without it, certain problems still present themselves for solution. Cow's milk differs from breast milk in several important particulars, both in its chemical composition and in the bacteria which it always and everywhere contains. Besides, it must be taken into account that milk is easily contaminated, and may become a vehicle of disease unless handled with great care. How to overcome these obstacles is the problem which has occupied the students of infant feeding for the past few years, and which still engages their attention. Whether the difference in chemical composition, or the presence of bacteria, is the more important, is still a matter of discussion. In Germany the latter opinion seems to prevail, and consequently the great majority of German writers still advocate sterilization at a high temperature (212° F.) In this country, on the contrary, high-temperature sterilization as a

routine practice is now advocated by very few, heating to a lower temperature (155° to 170° F.), *i.e.*, Pasteurization, being regarded as quite sufficient for all ordinary purposes; even this is thought by very many quite unnecessary where the production and handling of milk can be properly guarded, except in very hot weather.

It is in America especially, or we may say in America only, that anything like the accurate modification of the proportions of the different elements of cow's milk has been attempted. The methods employed in Germany in "*Gartner's Fett-milch*," are crude in comparison with those used in the milk laboratories of our large cities.

It would be going beyond the limits of this article to enter upon the discussion of the subject of milk modification. Its importance is everywhere realized. It is of interest in the present connection to glance at the steps by which our present position has been reached.

First was the period of indefinite modification, in which the milk was simply diluted with water, and sometimes also sugar, usually cane sugar, was added.

Secondly came the period of definite modification. After the composition of breast milk had become pretty accurately known, there were used various milk and cream mixtures in which it was aimed to secure the exact proportions of fat, sugar, proteids, etc., which existed in average breast milk. A single formula was made to do duty for all infants, one physician advocating one, another another—one which was widely employed analyzing four per cent. fat, seven per cent. sugar and two per cent. proteids. This was to be diluted with water in the case of young infants

Thirdly, the period of accurate modification. According to this method, which is now widely used, the proportions of the different milk elements—fat, sugar, proteids, etc.,—are varied separately according to the age and digestion of the particular infant under observation. Following this plan it is usual to start with a milk the composition of which resembles breast milk, except that the percentage of proteids is considerably lower on account of the difficulty which the young infant has in digesting the casein of cow's milk. The proteids are then gradually increased with the child's powers of digestion. In carrying out this method of feeding it is of great advantage to have the assistance of a laboratory such as the Walker-Gordon laboratories, which have been established in half-a-dozen of our larger cities, but the principle can be carried out anywhere if the physician knows even approximately the composition of the milk and cream he is using, particularly the amount of fat they contain. In using this it is necessary to have some way of expressing definitely the proportions used, and none is so satisfactory as that of giving the percentages of the different elements, fat, sugar, etc., employed.

It is not claimed that any modification of cow's milk can make it identical with breast milk, or in chemical composition in the digestibility of its proteids, but that we can approximate the natural food of the young infant more nearly by a modification such as has been mentioned than by any other form of substitute feeding. Such feeding

has certain advantages over breast feeding, in that proportions of the different elements, fat, proteids or sugar, may be easily altered separately in cases where any one may be difficult of digestion, this being possible in the case of breast milk only to a limited degree.

To the view just stated, at least in its essential features, the great majority of the students of the subject of infant feeding in America have now come, viz., the modification of cow's milk by percentages, the general guide being the composition of breast milk, but the guide in the particular case being the proportions best suited to the digestion of that infant.

We have thus far considered the differences between the chemical composition of cow's milk and breast milk, and have seen that these differences may be, although never entirely overcome, at least so much lessened as to make cow's milk a food which may be digested by average infants. It is also a fact so well established as not to need argument here that the nutrition of an infant who is able to digest properly modified cow's milk is on safe ground, no other food being necessary for its healthy development. This is something, as we have already seen, that cannot be said of any of the commercial foods.

We pass now to a consideration of the other objection to cow's milk as an infant food, viz, its bacterial content. The presence of the germs of the specific infectious diseases—diphtheria, typhoid fever, tuberculosis, etc.—may be a source of great danger, but, after all, not a very frequent one. It is a danger that, with the supervision of milk production, which it is easily possible to give, can be removed altogether. It is not, of course, meant that such supervision now exists, except to a very limited degree, but the experiment has gone so far as to demonstrate that such milk can be secured anywhere if either the public or medical profession are united in demanding it.

The presence of other bacteria than those just referred to are for ordinary purposes not less important. These are those which affect the keeping properties of the milk, and to some degree, no doubt, its digestibility; their presence is constant, varying from a few thousands to four or five millions to each cubic centimetre. This depends essentially upon the care exercised in the handling of the milk, and the time since it left the cow.

There are two methods of getting rid of the bacteria of milk: the first to destroy them by heating the milk; the second to keep them out by the exercise of the most scrupulous cleanliness in the production and handling of the milk, and greatly shortening the time from the cow to the infant.

The whole question of milk sterilization is still *sub judice*. That simply heating cow's milk to 212° F. for thirty, sixty or ninety minutes thereby fits it for infantile digestion, I do not believe. My experience is that the heating of milk in this way does not greatly influence its digestibility, although I recognize its value in cities during hot weather in the prevention of diarrhœal diseases. For myself I believe that the value of milk sterilization consists in improving its keeping qualities, and in the destruction of pathogenic germs, but that with a milk which is fresh, and

as free from bacteria as has been shown to be practicably possible, sterilization is unnecessary. I am almost willing to say undesirable, unless milk must be kept more than thirty-six hours and no ice can be had. This will, I believe, be the milk of the future. For the present, however, some form of heating milk is for general use desirable, the lower temperature, 155° to 170° F. for thirty minutes, being greatly to be preferred to higher temperatures and longer periods.

In closing this cursory survey of the question we will first summarize the points which may be considered as well established, and then mention some of the most important questions still under discussion. It is well established :

1. That good breast milk is the best infant food.

2. That no substitute for breast milk can be trusted which does not furnish essentially the same elements, fat, sugar, proteids, etc., as breast milk.

3 That these elements are found only in the milk of other animals, cow's milk being the only one that is available for general use.

4. That cow's milk requires some modification before it is fed to infants; first, because the proportions of the different elements (fat, sugar, etc.) are not the same as in breast milk; and secondly, because some of these elements, notably the proteids, are not identical with those of breast milk.

The important questions in infant feeding which are now in dispute are :

1. With reference to heating milk : Whether all milk shall be heated, if so, to what temperature and for what time; whether the purpose shall be mainly to destroy pathogenic germs, or to improve the keeping properties of the milk; also whether heating improves its digestibility, or the contrary.

2. With reference to cleanliness : What the standard of a " clean milk," bacteriologically speaking, shall be; also whether the exclusion of pathogenic germs by care and intelligence, and a great reduction in number of saprophytic forms by scrupulous cleanliness in milk production, may not give us what we need—clean milk a few hours old, which will have all the advantages of Pasteurized milk without any of its possible disadvantages.

3. With reference to milk modification : Whether such accurate modification as is measured by variations of small fractions of a per cent. is really essential, or whether less accurate modification may not give equally good results provided the original milk is the best possible. Much is still to be learned regarding precise indications for varying the proportions of the different elements in milk modification.

Infant feeding is a large subject, and let no one think to secure the best results without giving both time and thought to the problem. It is still a rich field for study which will amply repay any one who devotes himself to it.

# Medical Societies.

## TORONTO CLINICAL SOCIETY.

The forty-first meeting of the Society was held December 8th, 1897. Dr. A. A. Macdonald occupied the chair.

Fellows present:—McDonagh, Peters, Parsons, Boyd, Garratt, Temple, Ryerson, Primrose, Wright, Macdonald, Fenton, Murray, Bingham, King, Oldright, Grassett, Hamilton, Cameron, Fotheringham, Brown. Dr. Graham Chambers was elected a member of the Society.

Dr. Fotheringham reported a case of hysteria in a girl aged 10. Three years before he saw the patient she had an attack of diphtheria, which might have given rise (in the opinion of those who saw her) to the paraplegic symptoms which appeared November 30th, 1895, disabling the child from feeding herself for ten months. One eye was closed for three months, and the movements of the other were impaired. Some weeks after there were twitchings of the arms and legs, but not spastic. For a time there were rhythmic movements of the head which were carried on in a rotatory fashion against the fists. The paralysis disappeared during sleep. There was no tendency to bed sores; and there was no marked wasting. At first there was some headache and some insomnia. The patient was hyperæsthetic in the presence of the mother; less so when the doctor was in. There were two sensitive spots over the two upper lumbar vertebrae. Under purely suggestive treatment there was a complete cure. The doctor then discussed the differential diagnosis. The diagnosis of hysteria depended upon the following facts: The interval between the diphtheria and the onset of the paralysis; the distribution of the paralysis and its disappearance during sleep; there was no active atrophy; the absence of bed sores; the increased knee jerk; the position of the legs—that of simple helplessness; the rythmic spasms; the twitchings; the hyperæsthesia, more marked in the mother's presence; and the hysterical stigmata.

Dr. Bingham referred to a case in which he had operated for empyæma. Although complete recovery took place the child would not allow its mother to touch the affected side.

Dr. William Oldright said that it was stated that there was an absence of the faucial reflex in these cases.

Dr. Fotheringham said that he did not think that this was so. In certain cases the fauces might be one of the anæsthetic areas.

Dr. Primrose presented a child aged seven who had come to the Children's Hospital with a psoas abscess. The treatment consisted of opening the abscess, curetting with the finger-nail, injecting a 10 per cent. solution of iodoform and glycerine, stitching, and sealing up with collodion. Healing took place by first intention.

Dr. Bingham presented a child upon whom he had done an œsophagotomy, for a button at one point had begun to ulcerate through, which made him pleased he had not persisted with the forceps in trying to extricate it prior to operating. The case was doing well.

Dr. Parsons related having assisted at removing a set of false teeth from the œsophagus. The wound suppurated. It was a difficult matter to keep such wounds from being contaminated.

Dr. E. E. King reported having had two cases of foreign body in the œsophagus—in one case it was a cent, in the other a piece of oyster shell. He was able to locate the cent with the X-rays. He was able to remove them by the probang.

Dr. Garratt reported a case he had seen with Dr. Harris. A cent had lodged in the œsophagus which they were able to locate with the X-rays. They introduced a bougie and shoved it into the stomach.

Dr. McDonagh reported a case where a child had swallowed a small tin whistle which became lodged in the œsophagus. He was able to reach it with an ivory-pointed bulb, and removed it with a pair of forceps.

Dr. A. Primrose, a paper on "The Physics of Surgical Dressings." This was the review of a paper by a Russian medical man, who holds that the success of the treatment of wounds by the Listerian method depends not so much upon the antiseptic qualities of the dressings as the allowance for drainage and evaporation from the wound, in the stream of which the germs would be carried.

Dr. Cameron, Dr. Oldright, and Dr. Parsons took part in the discussion.

## TORONTO MEDICAL SOCIETY.

The regular meeting was held Dec. 9th in the Council building.

Present: Drs. Cameron, Oakley, Scadding, Galloway, McKeown, Parker, Spence, Hastings, Badgerow and Brown.

The chair was occupied by Dr. Oakley.

The minutes of the last meeting were read and adopted.

Treatment of Toxæmia by the Principle of Osmosis.—A paper thus entitled was read by Dr. Walter McKeown. For two years the essayist said it had occurred to him that toxœmia could be treated by carrying out the osmotic principle; but an opportunity of testing its efficacy on a test case did not occur until recently. The case was one of chronic pyoperitoneum from a probable ruptured pus tube. The patient was in such an extremely bad condition that as soon as the abdominal incision was completed, allowing for the escape of a large quantity of very offensive pus, further measures could not be taken, so badly was the patient taking the ether. Some iodoform gauze was passed into the wound, and a few stitches introduced hurriedly. Shortly after one and a half pints of normal salt solution were introduced into one of the veins of the arm, and a cupful of saturated solution of magnesium sulphate high into the bowel. This was done some six times during the next few days. A chill followed each injection, but within an hour or so the temperature would fall to normal or thereabout, and there would be a corresponding improvement in the pulse. The patient is rapidly recovering. In a case of puerperal pneumonia the doctor was trying the same treatment with marked benefit.

His idea is that the toxins in the blood, which are crystalline, dialyze through the bowel wall and are thus eliminated, while the antitoxins do not, and remain to exert their restorative action on a reduced amount of toxines

It was too soon yet to generalize, but in these two cases he was pleased with the result and would continue his investigations.

Dr. J. N. E. Brown said the case was of interest to him, because he administered the anæsthetic, and had watched the progress of the case. The woman was in a very weak state when she went on the table, owing to the profound toxæmia. The abdominal fat showed that characteristic appearance seen in these toxic cases. He was gratified to see the ease and celerity with which a quart of the solution was run into the vein through a funnel, rubber tube and aspirating needle; and also the rapid improvement of symptoms.

Dr. Spence thought the procedure was reasonable, and desired to congratulate Dr. McKeown on the results so far. He thought the treatment might have a wide application.

Dr. C. J. O. Hastings certified to the value of high injections of salt solutions into the bowels in septic cases.

Dr. Oakley said he was slow to adopt new methods of treatment. He had now come to believe in the value of antitoxin in diphtheria. He was disposed to look favorably upon this plan of treatment, although he did not quite understand some features of it.

Dr. H. P. Galloway considered the plan of treating toxæmia advocated by the essayist worked up in a scientific way; and if further investigations confirmed the results obtained it would be one of the most useful discoveries that had yet been made known to the profession.

Dr. I. H. Cameron said he had no criticism to make on the theory. He had tried the injection of normal salt solution into the connective tissue beneath the breast, and magnesium sulphate per rectum, in hysterectomy case where severe distension had supervened. It acted beneficially.

Dr. H P. Galloway showed an apparatus for rolling plaster bandages. It consisted of solid board about 30 in. by 10 in., with an aluminum plate nailed to each side. Across the centre was placed a metal shingle on its edge, which could be raised and lowered in grooves at the sides, and when down would allow the flat bandage to be drawn under readily. The plaster was placed on one side, the bandage passed through and under the diaphragm and rolled on the other side.

The Society then adjourned.

---

## MEETINGS OF MEDICAL SOCIETIES.

The regular meeting of the Pathological Society was held in the east wing of the Biological Building on Saturday, Nov. 27th, at 8.30 p.m.

There were present: Dr. H. B. Anderson, President, in the chair; F. N. G. Starr, H. J. Hamilton, D. J. G. Wishart, W. Oldright, W. H. Pepler, R. B. Nevitt, J. J. Mackenzie, J. M. MacCallum, R. D. Rudolf, G. A. Peters,

J. T. Fotheringham, G. Boyd, E. E. King, A. Primrose, J. A. Amyot, H. C. Parsons, I. H. Cameron.

There were present also as visitors: Drs. H. A. Bruce, H. Mullin, Scott, and Large, Silverthorn, and C. J. O. Hastings.

PROGRAMME:

1. The pathology of Baldness and its relation to Seborrhœa.
   Dr. W. H. Pepler.

Specimens:

1. (*a*) Lungs from a case of drowning.
   (*b*) Corpus luteum.
   Dr. W. J. Greig.
2. (*a*) Hypertrophied single kidney.
   (*b*) Tuberculosis of testicle.
   (*c*) Pyelo-nephritis with multiple strictures and dilatations of ureter.
   (*d*) Sacculated bladder.
   Dr. E. E. King.
3. Carcinoma of breast and lymph glands—with slides.
   Dr. Wm. Oldright.
4. Aneurism of aorta.
   Dr. H. C. Parsons.
5. Carcinoma of stomach—with slides.
   Dr. J. T. Fotheringham.
6. Carcinoma of stomach.
   Dr. A. McPhedran.
7. Invaginated Meckel's Diverticulum.
   Dr. G. A. Peters.

The specimens and the papers and discussions following these proved to be of unusual interest.

---

TREATMENT OF EXOPHTHALMIC GOITRE.—At a recent meeting (July 27) of the Academy of Medicine, of Paris, a paper by Jaboulay was read dealing with 9 cases of section of the cervical sympathetic for exophthalmic goitre. The results were good, both with respect to the exopthalmos and to the goitre and palpitations. The best effect was obtained in young people in whom presumably the accelerator system of the heart was less developed and more thoroughly modified by the division of the sympathetic. In cases of failure of the treatment, an explanation might be found in the existence of two sympathetic cords in the neck—a not infrequent anomaly. At the same meeting Doyen reported two cases of exophthalmic goitre successfully treated by thyroidectomy. He preferred this operation to division of the cervical sympathetic, both on account of its safety and for its beneficial results. Such cases seemed to demonstrate the pathogenic role played by hypersecretion from the thyroid.—*Progres Med.*, June 31, 1897.

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.



EDITOR:
JOHN L. DAVISON, M.D.

ACTING EDITOR:
J. T. FOTHERINGHAM, M.D.

ASSOCIATE EDITORS:

*Surgery*:
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine*:
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology*:
J. ALGERNON TEMPLE, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics*:
CAMPBELL MEYERS, M.D.

*Pathology and Bacteriology*:
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat*:
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D.

*Pædiatrics*:
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M D.

*Eye and Ear*:
G. STERLING RYERSON, M.D.
C. TROW, M.D.

*Genito Urinary Surgery*:—G. P. SYLVESTER, M.D., Business Manager

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* DR. G. P. SYLVESTER, Business Manager, 585 Church St,, Toronto.

**The Largest Circulation of any Medical Journal in the Dominion.**


## Editorial.

### THE VICTORIAN ORDER OF NURSES.

As was predicted last month, this scheme, in somewhat amended form, has lately been most vigorously explained and exploited, both before the medical men, the nurses, and the public, of the city. The local organization has been completed, at least temporarily, and the Augean task of raising the endowment has been begun. It is idle to say that the profession has been converted from views formerly erroneous, have seen the error of their ways, and, repenting, have taken up with enthusiasm the scheme which formerly they condemned. The explanations and details given so ably, frankly, and fully by Dr. Worcester, of Waltham, Mass., who came at Her Excellency's request (at his own expense) to describe the working of their local District-Nursing Scheme in Waltham, convinced most of those who heard them that a District Nursing System which is so successful in Germany, in England, and in part of the United States, would be a most desirable thing in Toronto, with certain modifications of a local nature to be determined by the local Board, the interests of the Nursing-at-Home-Mission being duly regarded. This is not

saying that the hearers were convinced that the Victorian Order of Nurses is a good thing. The new constitution is shorn of all the verbiage which so fairly gave offence before, and now the scheme seems to be little else than one of District Nursing. The former objectionable points, such as the proposal to train and examine their own nurses and to bring them in from London or any other part of the world, and to establish maternity hospitals where, so far as appeared from the original prospectus, the nurse was to reign supreme and the doctor appear only on sufferance, have been at any rate relegated to the background for the present. The profession, however, wish something more definite than mere platform assurances as to details before giving their adhesion. They stand very much aside from a scheme which has such possibilities of pauperization in it, and wish to learn among other things the exact constituency from which it is proposed to secure the nurses, and who are to have the power of appointment and dismissal; the exact means by which it is proposed to prevent improper utilization of the nurses by persons able to pay for their services, and how the exact point in the proposed sliding scale of fees is to be determined in each case; whether the services of the nurse are *in all cases* to be called into requisition only by the physician; these are only a few of the points which have been so imperfectly explained as yet to the mass of the profession. We may seem to some to be acting an ungracious part in still withholding our assent and consent. Probably it is the fuller personal explanations and discussions that have made the scheme find favor in the eyes of those of the profession who are being quoted as now so strongly in its favor. They are men who do not change their opinions for no cause, and can be trusted not to have been converted, but to have seen the good points in the plan and to have accepted the explanations which have not as yet reached the rest of us. Her Excellency deserves our sympathy, if she will permit us to say so, in the deplorably poor tact with which her original advisers floated the scheme, so that any merit which it now possesses, some of it, perhaps, the result of the criticism with which it was first received, can scarcely serve to make it gain headway against the bias left in the public mind; the *vis inertiæ* would have been enough in any case to overcome. And in the meantime the profession can be trusted to accept in a spirit of fairness any elaboration of the scheme which may in the future be presented by those of their number who are on the Local Board.

## MATERNITY BOARDING HOUSES.

The legislation secured last year, at the instance of the city of Toronto, entitled "An Act to regulate Maternity Boarding Houses and for the Protection of Infant Children," has been receiving a good deal of attention of late in the city. The subject is one that at once arouses the sympathy and interest of every physician. Not one of us but has been at one time or another stirred to wrath at sight of the pitiful wailing wrecks who, though born "to rule by the Right Divine of helplessness," are by a process of slow murder removed from the need of earthly care. We are well

aware that Toronto is probably more free from this public evil than any city in the world, and hope that the tender public conscience may not raise an undue *furore*, and so do harm in addition to the good which may be done by judicious legislation. The provincial Act of last year will probably by experiment be found capable of amendment in a few details. For instance, it is permissive, not compulsory, and comes into force only by the act of the municipality. It thus shares the ill feature common to all "local option" legislation, and if adopted by the City Council would probably make things worse by driving these houses to the outskirts of the city, where any contemplated villainy would be even easier of accomplishment. The ladies who have so conscientiously and steadily followed the matter up deserve the thanks of the medical profession in particular and of the community at large. As it stands, the main provisions of this Act are as follows:

1. No boarding-house may be kept for any maternity case, nor as a home for "one or more infants," without registration and a license from the Board of Health of the municipality, which has full discretionary powers.

2. Every birth in such a house *shall* be attended by a legally qualified practitioner, and *shall* be registered in due form. [An important point as tending to determine *paternity*.]

3. The adoption of children (the chief means by which hitherto the unfortunates have been done to death) is absolutely prohibited, except through the medium of a Children's Aid Society, or other duly incorporated Charity, under rules to be approved by the Lieut.-Governor-in-Council. Advertising of these children for adoption is prohibited under penalty.

4. Responsibility for notice of death in the legal way is laid directly upon the keepers of such registered houses, and Boards of Health are ordered to provide for proper inspection, at any time, of the entire premises, the registers, and the inmates.

It will be found necessary to provide for the secrecy of the institutions, as, if they are to be in any sense public property they will never be patronized, and the evil will be made worse by becoming more subterranean. The general effect of the Act will be to put these places on very much the same footing as the Burnside Lying-in-Hospital, a consummation devoutly to be wished for, for humanity's sake.

---

## TRINITY MEDICAL COLLEGE ALUMNI ASSOCIATION.

The attention of all readers interested is directed to the appended excerpts from the Constitution of the Trinity Medical Alumni Association, more particularly to the date, March 1st, 1898, by which competitors must have handed in their theses. It is to be hoped that the enterprise and scientific ardour shown by the Association in offering the "Alumni Gold Medal" may meet with a most encouraging response in the number and character of the theses submitted. Especially should the Association expect great things from the younger men, those recently returned from post-graduate work abroad or still so engaged.—[Ed.]

The Alumni Association includes Active, Associate and Honorary Members.

Graduates in Medicine of Trinity University, Fellows by Examination of Trinity Medical College, Teachers past or present of Trinity Medical College and the Undergraduates' Representative on the Executive Committee are eligible for Active membership. Undergraduates of Trinity Medical College are eligible to become Associate members. Honorary members are those elected as such at any general meeting.

The objects of the Association are: The furtherance of medical science, and to foster an "*esprit de corps*" and fraternal feeling among the graduates and undergraduates.

REGULATIONS, ETC.

The General Meetings are held annually in Toronto, on the day appointed for the conferring of Medical Degrees. Yearly dues fifty cents.

All Alumni are requested to send their present address, or other items of interest, to the General Secretary.

ALUMNI GOLD MEDAL.

The Association offers annually a gold medal, under the following conditions:

1. Only graduates and members of the graduating class in Medicine of Trinity University, or of Trinity Medical College, or Fellows of Trinity Medical College who are members of the Association in good standing, can compete for this Medal.

2. The Medal may be awarded annually for the best thesis on any subject pertaining to modern medical science.

3. All these must be sent in to the General Secretary of the Association on or before March 1st in each year, signed only by pseudonym, the name of the writer to accompany his thesis in separate cover.

4. The awarding of the medal shall be determined by a committee of three, to be appointed annually by the Executive Committee of the Association.

5. The theses standing first and second respectively in merit shall be read by the writers, at the Annual General Meeting, and the Medal shall be presented at the Annual Dinner of the Association.

6. If in the opinion of the judges no thesis of distinguished merit has been submitted, the medal shall not be awarded.

## EDITORIAL NOTES AND CLIPPINGS.

CAUSES OF SUBNORMAL TEMPERATURE.—Dr. Janssen sums up the causes of this condition as follows:

1. After the direct withdrawal of heat from the body, as in cases of exposure of unconscious or drunken persons in a very cold atmosphere, or after immersion in very cold water.

2. After the loss of great quantities of fluids from the body, as in severe diarrhœa, enteritis, cholera, or profuse hæmorrhage.

3. In conditions of cachexia and inanition, such as cancer of various parts of the alimentary canal, severe forms of diabetes, pernicious anæmia; during convalescence from febrile affections, and in many chronic mental diseases.

4. In grave circulatory disturbances, as in cardiac failure.

5. In various diseases of the central nervous system, in tuberculous meningitis, at the onset of cerebral hæmorrhage and embolism, in some cases of brain tumor, and in general paralysis of the insane.

6. After irritation of sensory nerves, as in intestinal strangulation, in renal and gall-stone colic, internal perforation of the intestines, etc., and after surgical operations.

7. In extensive skin affections, such as scleroderma and extensive burns.

8. After fevers, where the temperature may long remain subnormal, or in the course of certain fevers, as in pyæmia.

9. In cases of poisoning by phosphorus atropine, morphine, carbolic acid, and in alcoholic intoxication; also in the auto-intoxication of uræmia and in diabetic coma.

In some healthy persons subnormal temperatures are occasionally observed without any apparent cause.

---

It is not disappointing to British readers to find some, at least, of the profession in New York State vigorously condemning their so much vaunted scientific means of capital punishment by electricity. The name "electrocution" alone is enough to make one shudder. In a recent number of the *Atlantic Medical Weekly*, Dr. T. H. Manley, of New York, returns refreshed to the charge, after a visit to the Moscow meeting of last August, with added opinions and experiments from Sir Dyce Duckworth's paper there, and from Professor MacEwan, to the following effect, vigorous and correct enough, certainly.—[ED.].

"It is, therefore, a plain, demonstrated fact that electrocution is a most shocking mode of death; not so debasing in sound as 'hanged until dead' but not so deterrent and none the less agonizing.

The medical profession, as a learned and humane body, should sternly turn its face against any of its members participating in any executions whatever, except for the purpose of deciding on the extinction of life. In the face of these facts it is most certainly to be hoped that this mode of capital punishment will soon be abolished, and that, at all events, it may not be adopted by any of our neighboring states."

---

METHYLENE BLUE IN PAINS OF ATAXIA.—In two cases I have found in relief; in five out of seven a great diminution in the intensity and frequence of the pains, and in two the reaction was complete and prolonged.

The fulgurating pains in the limbs and the girdle pains yield the most rapidly to the methylene blue. The visceral pains, especially those of the stomach and rectum, resist more. The vesical disappear more rapidly. The two patients in whom the medicine failed totally had gastric pains to the exclusion of all others.

The effect of the methylene blue is very rapid, and the pain is relieved two or three hours after the urine becomes blue. Another advantage is that it persists many days and even weeks after the patient has ceased taking the medicine. It produces not only almost immediate relief, but is also a medicine which ameliorates in a durable manner.—Lemoine, *Comp. Rend. de Biologie*, June, '97.

---

FUNCTION OF THE SUPRARENALS.—The extirpation of both suprarenals causes a decided diminution of the blood-pressure; the pulse becomes smaller.

Introduction of suprarenal extracts into the veins produces, chief of all, a decided increase of blood-pressure, and increase of the heart's action.

The blood flowing from the suprarenal veins, when introduced into the circulation of another animal, causes the same phenomena as do the suprarenal extracts when introduced into the blood, but in a lesser degree.

It is concluded, therefore, that the suprarenals are organs of undoubted necessity to life, being glands with an internal secretion; that it is their duty (especially of the medullary substance) to produce and transmit to the blood a substance which continually upholds the activity of the vasomotor nerve-centres, the vagus, and the accelerator nerves, as well as the respiratory centres, and in all probability the centres controlling muscular tonicity.—SZYMONOWICZ, in *Archiv für Physiologie.*

---

## Book Reviews.

A TEXT BOOK OF PRACTICAL THERAPEUTICS.—By H. A. Hare, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc., etc. Sixth Edition. Lea Bros. & Co., Philadelphia and New York, 1897. This standard text book is well worthy of a place in the hands not only of every final student in medicine, but of the practising physician as well. It represents the most advanced thought, is free from useless and obsolete matter, but thoroughly sound and conservative at the same time. The full title gives the key-note to the whole work—"the application of remedial *measures*" (not "drugs"—Ed.) "to disease, and their employment upon a *rational* basis" (italics ours). The modern revolt against over-use of drugs, and the author's attitude thereto, is shown concisely in the motto of the work: "When called to guide a patient through an illness the physician should be constantly a watchman, and a therapeutist only when necessity arises." Still, no one who reads the work through can charge the author with lack of confidence in drugs properly used.

CONSTIPATION IN ADULTS AND CHILDREN.—By H. Illoway, M.D., formerly Professor of Diseases of Children, Cincinnati College of Medicine and Surgery, etc. $4.00. New York: Macmillan Co. 1897. For sale at Tyrrell's Book Shop, 12 King St. W., Toronto. The general impression given by a cursory perusal is that there is more bibliography and detailment of cases rare or peculiar in character than exactly suits the needs of the reader who is seeking help in the management of cases of his own. The scholarship of the work cannot be very highly praised nor is it likely to be an epoch-marking production. As a specimen of the bookbinder's art the volume will fully sustain the reputation of the publishers.

# Publishers' Department.

## PHTHISIS PULMONALIS.

BY L. H. WARNER, M.D.

The nature of the morbid process which leads to the destruction of lung and the waste of body, of whatever etiological origin, is of two classes:

1. Inflammation, affecting in various degrees of severity the tissues of the lung, and running an acute, chronic or chequered course.

2. Tubercular growths, with their characteristic granulations disseminated through the lungs grouped, or through inflammatory changes developed into fibroid tissue, or undergoing necrotic change.

We often find fatty degeneration as a consequence of inflammation, the former leading to caseation, which is produced by the action of the tubercular baccili. The inflammatory process is the destroying element in phthisis pulmonalis, and the seat of the tubercle is the interstitial connective tissue of the lung, and its caseation and softening are the causes of lung destruction. In the treatment of phthisis pulmonalis it is, therefore, of primary importance to seek for, and remove as far as possible, the causes which have been at work producing it The patient should be actively nourished by introducing into the system the necessary amount and quality of food required to build up and sustain healthy tissues as quickly, continuously and extensively as the combined capacity of the patient's digestive ability, the ingenuity, knowledge and resources of the physician, cook and larder will allow. With a sound stomach there is great hope for a patient. Physical exercise in many cases is of great help; such as running, excepting in cases of malnutrition or when producing pains in the pulmonary region. Running encourages vigorous respiratory action, thus enlarging and giving increased nutrition to the pulmonary tissues. With the facts above enumerated, I have for some time past given particular attention to the treatment of this disease, using the various methods advocated by different authorities. In multitudes of cases successful treatment depends upon the co-operative aid of medicaments, combined with hygienic treatment. A large majority of phthisical patients would be saved from the ravages of this disease if the proper tonic could be administered to them at the right period, thus giving the pulmonary tissues sufficient ability to resist the commencing action of the disorder. The administering of medicine in these cases is for the purpose of improving the general nutrition of the patient. Opinions differ as to the expediency of administering alcohol to the phthisical patient, although I advise same for its anodyne effect, it having the virtue of reducing heat and repressing active tissue changes and supporting and stimulating the heart's action. The administration of Cod Liver Oil has its advocates, pro and con I may note here that medicine is not given with a direct view of a specific influence on the disease, but it may be most advantageously given to promote the building up and the maintenance of the bodily tissues in that elevated health status which is our only hope

for staying the progress of the phthisical process. Those physicians who favor the administration of Cod Liver Oil in this disease claim for it a twofold virtue—the utilization of its fatty elements as a food, and the nutritive tonic effects of its peculiar principles, the alkaloids. Of late years some most convincing proofs as to the efficacy of the alkaloids of Cod Liver Oil have been brought to light, being the results of scientific researches and pathological and clinical tests. Statistics from hospital clinics and private practice bring proof that numerous phthisical patients have improved better under the alkalodial preparation of Cod Liver Oil than under the oil itself, the former not causing the usual nausea and eructation which accompanies the latter product. I have observed in patients who were put upon large doses of Cod Liver Oil that on examination of the stools passage of oil by the bowels was discovered. An examination, chemical and microscopical, of the oil taken by the patient, showed therein the presence of alkaloids, while the oil passed through the bowels, and, washed of the stools, was devoid of these principles, only confirming my belief that the active medicinal principles of Cod Liver Oil are the alkaloids therein. These facts lead me back to the introductory lines in which I outlined the morbid process which leads to the destruction of lung tissue and waste of body. The hydro-carbon, or fat, of Cod Liver Oil generally taxes the digestive system too severely, and hence the eructations following the administration of this remedial agent in its entirety. In wasting diseases it is of primary importance to rebuild wasted tissue and to prevent the accumulation of nitrogenous waste which will follow the administration of fatty substances. The hydro-carbon of Cod Liver Oil inhibits the metabolism of the albuminates, and thus causes a direct accumulation of fat in the system, and hence an undue accumulation of nitrogenous waste. The alkaloids of Cod Liver Oil are known as alteratives, and as such have the power of stimulating the cells to eliminate waste matter from the system and to build up healthy tissue from food. The hypophosphites are of undoubted value in this disease, as is dilute hydrocyanic acid; and all these remedial agents are combined in Wampole's perfected and tasteless preparation of the Extract of Cod Liver Oil with the hypophosphites, malt and wild cherry. This preparation has been tried and found efficient both as tissue builder and food.

---

Dr. J. M. Hole, of Salem, Ohio, hopes that Unguentine will get into the hands of every practitioner of medicine in this country. He remarks that he would not be without it for an hour for ten times the amount of money it costs.

The first case on which I used your Unguentine was a case of frosted feet, extremely tender to the touch and very sore. Had been using the ordinary remedies for some time without any result. The first application of Unguentine was a surprise to myself and the patient, and in a few days they were entirely healed and the patient discharged.

I have been in constant practice in medicine for over fifty years, and can say for it what I cannot say for any like remedy in the whole catalogue, that it beats them all.

# The Canada Lancet.

VOL. XXX.] TORONTO, FEBRUARY, 1898. [No. 6.

## ORIGINAL ARTICLES AND COMMUNICATIONS.

### THE OXYTUBERCULINE OF HIRSCHFELDER IN THE TREATMENT OF TUBERCULOSIS.

BY F. LEONARD VAUX, M.D.C.M. TRIN.,

Senior Asst. Phys. Mt. Sinai Hospital, New York.

When Jenner, in 1798, discovered that milkmaids who had been accidentally inoculated with cowpox were thenceforth immune to that most terrible of scourges, smallpox, he not only presented to the world its greatest therapeutic agent for the prevention of disease, but in addition laid the foundation of serum therapy. Nearly 100 years later a poor German physician, but recently graduated from the University of Berlin, sat in his small office poring over the microscope in the intervals between his few professional calls, which were rewarded by the munificent sum of sixpence. But Robert Koch was amply repaid for all his labor and self-denial when, in 1890, he announced to the world, through the columns of the *Deutsche Medicinische Wochenschrift*, that in his opinion, after the greatest care and research, a specific serum for the cure of tuberculosis had been discovered.

We all remember the manner in which this announcement was received, the scientific world first dubious and then exultant, the shower of honors, medals and decorations, and, above all, the fame which bade fair to make his name immortal. But that which touched his heart more than all else were the cries and prayers that came to him over the entire globe from those suffering in every conceivable manner from the Great White Plague of the North. Mothers brought their infants, and men whose lungs were but one huge cavity came also, all buoyed up with the firm belief that in Berlin a sure and certain cure awaited them.

But sadder than the coming was the going, for despair reigned in their hearts and altered their very countenances. Nor was the disappointment confined to great centres. It is safe to say that wherever modern medicine had a foothold in this globe, that there were brave and patient practitioners attending doomed yet hopeful patients, both looking forward to the hour when the savants of Europe and America should pronounce the new remedy a cure indeed, and modern enterprise have manufactured and placed it within reach of all.

Nevertheless, though the expectations of the world have not been

realized, Koch's tuberculin still remains an absolute diagnostic agent for the discovery of the dread disease, though the febrile reaction is too violent to allow its use elsewhere than in cattle. If through its use, however, bovine tuberculosis be ultimately stamped out, and infection by milk and meat disappear, Koch's labor will not have been in vain. During the past ten years he has been steadily at work, and the results of his further investigations were summarized in July, '97, by the description of a new antituberculous serum, designated T. R., which he claims will be of great value and is now being tested clinically in very many hospitals. Of this I shall speak further on. In the last eight years serum therapy has received great impetus from the work of Roux, Behring, Ytinase, and last, but not least, Widal, who, with Pfeiffer and Wyatt Johnston, are deserving of great praise for their work in the serum diagnosis of typhoid, which must be only a step toward the serum cure of that disease. But much as this is needed and valued, the minds of all scientists turn toward the Mecca of their hopes, the prevention and cure of tuberculosis. Many serums looking to this end have been brought to the notice of the profession from time to time, only to sink back into obscurity. Some excellent results, however, have been credited to them, and in more than one instance it has been hinted that lack of funds to carry on further investigations has alone prevented the consummation of the desired end.

For some time back Dr. Hirschfelder, Professor of Medicine in Cooper Medical College, San Francisco, has been working on a serum which he claims to be possessed of undoubted curative properties, and which he styles "oxytuberculine." Of the details of its manufacture and the mode of its administration I shall now speak, and shall also cite several cases which under my observation have been treated with it.

It may be of interest here to speak briefly of the different methods employed by various workers to produce a serum designed to check or cure tuberculosis, noting also the main points of difference between them all and the new oxytuberculine.

Koch's Tuberculine *(The Original).*—"Upon the surface of veal bouillon, containing glycerine and peptone, a pure culture of the bac. tuberc. is floated and cultivated at 38° C. After 6 to 8 weeks a pellicle, consisting of tubercular scum and containing the tubercle bacilli, will have covered the surface and sunk to the bottom of the vessel. The supernatant fluid is then sterilized by heat passed through a Pasteur filter, and evaporated to $\frac{1}{10}$ its volume. This is the crude tuberculine such as was formerly used. Now this crude liquid is precipitated with alcohol, washed, and dissolved in water, after which it is ready for use."

Kleb's Modified Tuberculine (*Antiphthisine*).—This is merely an adaptation of the above, being much diluted. Here, as in Koch's tuberculine, an organic acid is developed in process of manufacture, which prevents further growth of the tubercle bacillus. Let the medium be alkalinized and growth begins again. We are indebted to Trudeau, of Saranac, for these investigations.

Paquin's Serum.—The procedure used here follows closely the lines laid down for the preparation of diphtheria antitoxine, and indeed was

put forward only after the researches of Behring and Roux, involving as it does the knowledge of antitoxines, a theory not previously enunciated.

Starting with Koch's tuberculine (original), gradually increasing doses are injected into a horse till it is rendered immune to further injections of a corresponding amount. The blood from the jugular vein is then allowed to flow into a sterile flask, where it coagulates, and the sterile serum thus obtained is used as an antitoxine.

Maragliano, in Italy, has evolved a similar process, and many recoveries have been reported, especially in America, from the physicians using Paquin's serum, prepared in St. Louis. It is extremely difficult to estimate the amount of antitoxine actually dissolved and present in the serum so obtained.

Koch proceeded on the principle that immunization would be secured when the body should be invaded by great masses of bacilli (as in general miliary tuberculosis, when at a certain stage the bacilli disappear), and these bacilli should come in direct contact with the tissues. The necessity of separating the bacilli from the cells in which they are found had been pointed out some time previously, and this Koch aimed to accomplish by extracting the bacilli with deci-normal sol. N.A.O.H. The fluid obtained in this way was designated T. A. (Tuberkulin Alkalisches), but was not free from bacilli, for in a field of the microscope 5-10 might be seen lying dead, separately, not in heaps. When administered it produced a reaction quite similar to that of the old tuberculin of '90; relapses were, however, less frequent. Finally it was abandoned. Failing to extract the bacilli from their covering of fatty acid, Koch resolved to crush them in a mortar, dissolve the mass in distilled water, and treat it with a powerful centrifuge.

In this way the fluid was divided into two layers.

Koch's T. R. (*Tuberculum Residuum*). 1. An upper layer containing *T.B.C = T. O. (Tuberkulin Oberst).

2. A lower layer consisting of a colloid sediment with a few bacilli = T. R. (Tuberkulin Rest).

The T. R. was then again dried, pulverised, and treated as before in a centrifuge (giving 4,000 revolutions a minute) for ¾ hr. The process was repeated again and again till the last bacillus was destroyed and the whole fluid become perfectly transparent. Trudeau, however, has found living bacilli in T. R. and doubts whether one can ever be sure that they are absent. Koch evidently believes that one or more living bacilli are incapable of harm to a tuberculous organism.

The immunizing action of T. R. is very great, but this is entirely apart from any febrile reaction, while in the old tuberculin the two were associated. If one be immunized with T. R. he is proof against treatment with T. A. or T. O. For the preparation of T.R. the most recent and virulent cultures must be used.

Hirschfelder's Tuberculine (*Oxytuberculine*).—I have dwelt upon the principal tuberculins and serums which up to the present have attracted the attention of the medical profession, as a prelude to the detail-

* For the sake of brevity the tubercle bacillus will hereafter be referred to as T.B.C., a pseudonym which is constantly employed in Mt. Sinai Hospital.

ed description of oxytuberculin, and in order that a better comparison may be made between the underlying principles involved in its manufacture and those of others, and to do this rightly reference must first be made to an event which is now classic in the annals of surgery and medicine.

In 1862, the late Sir Spencer Wells, opening the abdomen for the removal of what he believed to be an ovarian tumor, was surprised to find, instead, the intestines covered with pearly nodules, interspersed between which were gray granulations, fibrinous deposits in all directions, and a large amount of opalescent fluid. He quickly closed the abdomen, recognizing instantly that he had to deal with tuberculous peritonitis and believing that his action might cause the woman her death.

To his surprise the symptoms for which operation had been advised soon disappeared, and on re-opening the abdomen some time later it was found that the fluid had been absorbed and the tubercles had gone.

Since then laparotomy for the relief of tuberculous peritonitis has been looked upon as a justifiable and even a routine procedure, so much so, in fact, that Konig has recorded 131 cases with but 3% of deaths, Lindner 205 cases with mortality 7.5% and Rorsch 358, with complete recovery in 250. (Allbutt, System of Med. iii., 670).

The theory most generally accepted is that of the oxygen so admitted being fatal to the bacillus tuberc., or more likely to its toxalbumins, as the bacillus itself is aerobic. This theory is indeed in line with the general constitutional therapy of sunlight and air advocated by all physicians for their consumptive patients; whilst in the great process of nitrification we see but another application of this law.

In studying this theory and the phenomena mentioned, Hirschfelder became convinced that the deleterious agent present in tuberculous peritonitis was really a tuberculine, such as Koch had artifically produced from veal bouillon and a culture of the bacillus; and that the admission of ozone to the abdominal cavity had, by destroying certain poisonous properties of this tuberculine, left a purified remedial agent, which he named Oxytuberculine. It was this oxytuberculine, he reasoned, which caused the tubercles to disappear, and at once he determined to cultivate if possible an artificial product. Accepting Koch's tuberculine (original) as the best to be obtained for the basis of his experiments, search was next made for the most suitable oxydising agent, which, after many experiments, was found to be Hydrogen peroxide, H2. O2.

The first results were not gratifying and Hirschfelder substituted for Koch's tuberculine one made as follows: "A highly virulent culture of T.B.C. was floated upon veal bouillon containing 4% Glycerine, 1% Peptone and ½% Sod. Chloride, to every litre of which, when neutralized 3 c.c. of a normal solution of Soda Carb. was added." It will be noted that in both tnberculines an acid is generated, which of itself would be fatal to development after a certain point, but in the modified serum the alkalinity is ultimately restored. (Since T.R. has been placed upon the market it is used in preference to all others).

The remainder of the process is as follows: "A measured quantity of the tuberculine so formed is mixed with 1-10 the quantity of a 10 Vol Sol

H2. O.2., and placed in a stertilizer at 100° C. Every 12 hours the same quantity of H2. O2. is added until the total amount so added equals that of the tuberculine. The total quantity so obtained is heated once more for 12 hours at 100° C. and then found to present these characteristics: Containing H2. O2.; highly acid; decidedly darker than the original tuberculine. The solution is then alkalinized with N.A.O.H. and re-heated to drive off the excess of H2. O2., after which 5% of Boric Acid is added to keep it from decomposing, and the solution is then filtered into sterile vessels." Such is the process by which a tuberculine has been manufactured differing radically from any of its predecessors, and giving brilliant promise but requiring to be carefully weighed in the balance of professional opinion generally.

ADMINISTRATION.—1. The best syringe to use is a large one such as Diphtheria Antitoxine is given with, and graduated up to 40 or 60 c.c.

An asbestos packing is preferable, as then the entire syringe can be taken apart, and each portion boiled, thus rendering it absolutely sterile. An ordinary aspirating syringe or large hypodermic may be used if none other is handy.

2. The oxytuberculine is now irritating and may be injected subcutaneously in almost any portion of the body, though the back is generally selected. Uniform and gentle pressure should be made over the site of injection to aid in diffusion. There is no febrile reaction, and the pain only that of an ordinary type. There will be no subsequent infiltration of tissue, unless the liquid has become infected, which may happen, as it is an aseptic not an antiseptic solution If it become cloudy, or should the injection produce local irritation, the fluid must be re-sterilized by heat for about 15 minutes.

The skin, of course, is to be well cleansed before injection, and the needle boiled.

3. Commence treatment with 5 c c injected daily and increased by 5 c.c. every 3 days until 20 c.c. is given. This is the usual limit, but in many cases a much larger dose can be administered.

Hirschfelder has given 100 c c. (over three ounces), which is about equivalent to 5 c.c. of Koch's old tuberculine.

4. When the usual maximum dose, 20 c.c., has been reached stop for three days, and in preference to increasing the dose commence a second series of injections with an initial dose of 5 c.c., and if necessary a third, fourth or fifth series.

5. If the case be in an advanced stage, injections may require to be extended over a period of about 3 months.

6. Unlike Diphtheria Antitoxine no remote effects upon the organs of excretion need be feared.

RESULTS.—Dr. Hirschfelder is naturally enthusiastic over his discovery, which, if reports are true, is certainly an important one. The investigations were reported by him to his class, as they progressed, during the the session '95-'96 and when completed, a committee of the Faculty of Cooper Med. College were asked to undertake a complete and impartial investigation into the merits of this new tuberculine, and in addition to examine the cases then, and previously under treatment. The committee

has lately reported most favorably, endorsing Dr. Hirschfelder's claims as to its curative properties, and laying special stress upon the fact that oxydation had completely destroyed any deleterious products of T.B.C. The Royal Belgian Academy of Medicine has, at the request of Dr. Hirschfelder, sent a distinguished member of the Academy to San Francisco to investigate every feature of the case, and to report not only as to its remedial powers, but as to its discovery and preparation. Trials of oxytuberculine are now being carried on in Brussels and Paris, so that ere long authoritative reports may be expected. Many physicians are now making use of it throughout the West, though, so far as I can ascertain, Mt. Sinai is the only Hosp. at present giving it a systematic trial.* Under the rules of the Hospital, however, tuberculous patients are only admitted in exceptional cases, therefore extended reports must come from institutions having a large number of consumptives. Appended will be found the records of six cases, together with the latest statistics collected by Hirschfelder. Pending the reports from Europe, there is no reason why physicians generally should not make use of oxytuberculine, especially in early cases, for clinical experiment has proved that if not curative in every instance, it, at least, produces no febrile reaction, constitutional depression or deleterious influence upon the body organs. This I can confirm from my own observations on the few cases here, in which it has been tried. I would also urge that practitioners using it should report their results either pro. or con.; for reports from the great body of physicians in the United States and Canada will be of much more value than the opinions of a few savants, no matter how great their learning or how wide their reputation.

In noting these facts and presenting the following cases, I am anxious not to extol oxytuberculine as having wonderful curative properties, and on the other hand to avoid any expressions which might prevent it from being thoroughly tried. It is but right to add that the statements of Dr. Hirschfelder have been warmly challenged by some physicians, they claiming that the process has been borrowed almost in toto from Koch, the principal difference being that he uses Hydrogen Dioxide instead of Hydrogen Monoxide. Of the truth of this statement I cannot say; it seems to me, however, that there has been a great deal of bickering engendered by Hirschfelder's work, mainly between champions of rival Medical Colleges.

A detailed and accurate description of the manufacture of both Koch's new tuberculine and oxytuberculine has been given above, to which reference may be made. Hirschfelder acknowledges his indebtedness to Koch for all work up to a certain point, claiming merely that oxytuberculine is a decided advance which he himself has thought out. It is urged that Koch initiated the theory of oxidation by centrifuging the mass of titrated bacilli dissolved in water (Hydrogen Monoxide) so that Hirschfelder, in employing Hydrogen Dioxide at a later period, is merely altering the process. After a close perusal of Koch's original article in the *Deutsche Med. Wochenschrift*, April 1, '97, I cannot find other rea-

*The oxytuberculine was obtained in July from Dr. Hirschfelder, through the kindness of Dr. L. W. Allen of the Resident Staff, and was the first to be used in the East.

sons for Koch's use of H2. O. than as a solvent, while the object of centrifugation is plainly stated.

Personally, I believe the tuberculine to be an excellent remedy, and the marked result obtained in Case IV. has impressed me very favorably. Had I a large number of tuberculous patients to treat, oxytuberculine would certainly be used with all.

As with every therapeutic agent, the chances of success are in direct ratio to the stage of the disease.

Hirschfelder lays, naturally, much stress upon this point and divides the disease into 4 stages:

i. "Infiltration of lungs with more or less pallor, loss of weight, cough, sputum containing T.B.C.

ii. Extensive infiltration of lungs with hectic fever, emaciation, large amount of sputum with many T.B.C. No cavities.

iii. Cavities, but still a fair degree of vigor. No dyspnœa when patient is quiet, but marked shortness of breath on exertion.

iv. Large cavities, and decided dyspnœa, profuse night-sweating, etc."

| | Total No. treated. | Cured. | Much Improved. | Slightly Improved. | Unchanged. | Worse. | Died. |
|---|---|---|---|---|---|---|---|
| Stage i. | 4 | 4 | .. | .. | .. | .. | .. |
| Stage ii. | 9 | 4 | 5 | .. | .. | .. | .. |
| Stage iii. | 25 | 2 | 18 | 2 | 3 | .. | .. |
| Stage iv. | 11 | 1 | 5 | 1 | 2 | 1 | 1 |
| | 49 | 11 | 28 | 3 | 5 | 1 | 1 |

---

INTUBATION.—Dr. Trumpp mentions that there is still some doubt as to the method of taking out the tube after intubation, whether by means of a piece of attached thread or by the extractor. There are disadvantages attending the thread method, and especially because the fixing of the tubes thus produced does not allow of its free play, and hence causes a liability to erosion of the parts. The use of the extractor, on the other hand, is hardly possible in private practice, as a sudden stoppage of the tube by membrane might cause suffocation unless the tube could be withdrawn without delay. The use of the extractor may also require considerable skill, especially where a small tube sinks deeply into the larynx. In a case where attempts at extraction caused a small tube thus to sink further down, the author adopted the following device: Pressure with the thumb was made on the trachea, just below the cricoid cartilage, where the end of the tube could be felt; the cough thus produced forced the tube out. The author has found that this method of expression never failed in the cases in which he subsequently tried it. The pressure may be made with both thumbs, the fingers finding support on the neck; it should be directed inwards and directly upwards. If a more powerful pressure is exerted the tube may be forced not only into the mouth but even completely out of it. The author has never seen any disadvantages attending this method. Of course the pressure should be made intelligently and not in too forcible a manner.—*Mun. Med. Woch.*

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

## THE RADICAL CURE OF UMBILICAL HERNIA BY OMPHALECTOMY.

BY JOSEPH RANSOHOFF, M.D., F.R.C.S., CINCINNATI.

The division of umbilical hernias into the congenital and acquired has long been fixed, since they differ in etiology and, to a certain extent, in their anatomical relations. In the present paper I beg to limit consideration to the umbilical hernia of adults.

In all its phases this has been, from the infancy of the art chirurgical, the most dreaded and the least cared for of the more common varieties of rupture. The rapidity with which gangrene develops in comparison with other forms of strangulated hernia and the relatively large fatality of relief operations must account for this former dread. For the long neglect in the matter of radical treatment, other than retention by truss, to which the non-strangulated hernias of the navel have been subjected, three factors are responsible. First, the mechanical difficulties of the operation inherent in the abdominal parietes; second, the complications, visceral and omental, within the hernia; and third, the very general tendency to recurrence. A brief consideration of these factors seems warranted, since it entails the better comprehension of the sources of failure and points the way to methods that make this less frequent.

The mechanical difficulties afforded by the abdominal walls are ordinarily a very thick layer of adipose tissue, in the depths of which, often two or three inches removed from the wound margin, there is found a small hernial ring. In three of the cases to be appended, this layer of fat, with the old operation of median incision, would have made the closure of the ring in the depths of the wound very difficult. Added to this layer of fat, in hernias that are larger than the size of a walnut, there is a very thin layer of integument, a spread-out covering of the umbilical cicatrix, which after operations even aseptically made is prone to undergo necrosis and be the cause of a late wound infection. The chief obstacle to success, so far as the abdominal wall is concerned, is in the hernial ring itself. As a rule, it is an aperture the margins of which are thin, rigid, and difficult of approximation, even when the ring is an

inch or less in diameter. In yet other cases, from omental adhesions or the use of convex pads, the margins are very much thickened and rigid, but none the less difficult of approximation. It is for this reason probably that most operators have at one time or another seen the necessity of enlarging the fascial aperture or excising it altogether, to be enabled to bring about a fair apposition. The most perfect approximation of the umbilical ring, when firmly united, still leaves no muscular covering between the peritoneum and the integument. The tendency to recurrence with every renewed tension upon the abdominal wall, such as would occur during pregnancy, would necessarily follow.

The visceral and omental complications of umbilical hernia form the source of greatest anxiety during the operation. In hernias of small size, though irreducible, the contents are, as a rule, limited to a large mass of omentum, which, though adherent in one or many places to the sac or the ring, can ordinarily be separated with little difficulty and removed. In the larger hernias there is almost invariably found a part of the transverse colon, and not infrequently many coils of the small intestine. While the latter do not ordinarily form adhesions, the transverse colon is prone to become adherent to the sac wall or to the omentum, or to both. To complicate further the relations, the sac is, as a rule, multilocular and divided into imperfect compartments by the presence of bands stretching from wall to wall. Fortunately, in these cases the hernial ring is, as a rule, very large, for which reason strangulation at the ring is a comparatively infrequent occurrence in these cases of umbilical hernias that resemble eventration. Nevertheless, even here obstruction of the protruded intestine is followed by colicky pains, vomiting, or gastric disturbances often enough to make it necessary to attempt a radical cure; or, if this is not feasible, so to enlarge the ring by incision as to preclude the probability of temporary obstruction. In these large eventrations much has in recent years been accomplished by radical operation; the only limit to operative interference would be so contracted a condition of the abdominal cavity as to prevent or preclude the probability of a return of the protruded intestine without the danger of inducing obstruction. There is no phase of abdominal surgery in which the danger of unintentionally wounding an adherent intestine is greater than in these large umbilical hernias when operated upon by the old method of the single median incision.

From the foregoing, the tendency to recurrence in cases operated upon by the older method is in part explained. The imperfect apposition of the margins of the ring, the absence of a muscular covering, unequal pressure on the wound margins by the interrupted suture passing through the entire thickness of the abdominal walls, the tendency to fat necrosis and sloughing of the integument, are all held accountable for the immediate failures often obtained and the very decided tendency to recurrence. Within recent years three very decisive steps have been taken to overcome the obstacles to success theretofore existent.

The first of these is the excision of the umbilical ring in all radical operations; the second, the suturing of the median borders of the recti muscles to each other; the third, the closure of aponeurosis and muscle

by a suture separate and distinct from that of the overlying adipose and cutaneous layers.

In 1888 Keen was forced to resort to excision of the ring in a case of strangulated hernia. Before that, in 1866, Storer had already resorted to this procedure, which probably has been forced on many operators. It remained, however, for Condemin, 1892, to elevate his procedure into a distinct method of operating for umbilical hernia. His object from the beginning is to excise the hernial ring, for which purpose he opens the peritoneum by elliptical incisions which meet above and below the median line and are carried directly down to the peritoneum outside of the peritoneal covering. After division of the skin, adipose layers, and fasciæ, he opens the peritoneum on the outer side of the ring itself. The single median incision is therefore discarded entirely. In the cases in which I resorted to this procedure, and two of them were of very large hernias, the operation proved to be very simple. It very greatly facilitated the return of the reducible portion of the hernial contents, and after the splitting of the sac, subsequently made, lessened, it seemed very greatly, the difficulties of separating adherent omentum and intestine. In one of the cases the hernia was quite as large as an adult head, the patient being of short stature and weighing over two hundred pounds. Except for the elliptical incision, the task of exposing thoroughly the ring and of severing adhesions of omentum and transverse colon would have been extremely tedious and accordingly dangerous. A further advantage of the complete excision of the hernial sac, with all the coverings of the hernia, together with the ring, is that at the close of the operation the conditions of the wound are best suited to primary union. The attenuated skin, the surrounding fat, the fibrous margins of the hernial ring, which are liable to necrosis, are removed, so that the wound really is like that left after the ordinary median laparotomy. In this method of operating, furthermore, there is included, as a rule, by necessity, the suggestion made by Gersuny in 1893, to suture together the median borders of the recti after opening their sheaths, in order that a continuous muscular plane may oppose the recurrence of the hernia. Unfortunately, the subjects of acquired umbilical hernia are usually women blessed with more fat than muscle, and the recti are found to be poorly developed, atrophic, or the site of fatty infiltration, so that in them too much importance must not be attached to the completion of the muscular plane between the abdominal cavity and integument as a preventive of recurrence. A third step in advance has been made in the separate suturing of the fascia and muscular layers on the one hand, and the integument on the other. In the four cases recorded, I have resorted to the silver-wire buried suture for the deeper structures, and the subcutaneous suture for the superficial part of the wound. In only one of the cases, that of the largest hernia, did secondary infection follow on fat necrosis. The deeper portion of the wound was not opened by the mishap. It is nearly a year since the operation was performed and a recurrence has not taken place. In a second case, in which the radical operation followed the relief for strangulation, a similar wound complication resulted. In one of the cases, which healed *per primam*, an abscess formed about the ligated omentum four months

after the operation and discharged through the abdominal wall. In three of the cases which I beg now to report, the operation was that of radical cure by omphalectomy. In the fourth case, that of a strangulated hernia, the omphalectomy was made secondary to the old operation.

Case I.—Mrs. S——, Dayton, O., aged forty-nine years, widow, has given birth to ten children, the oldest twenty-seven years of age. She has had a hernia since the birth of her last child, ten years ago. It was at first reducible, but, notwithstanding the use of trusses, has grown very much and become irreducible. She has never had any strangulation, but has suffered very much from colicky pains and constipation, which attacks come on at irregular intervals of one or two months, and confine her to bed for days at a time. When not so affected she is able to do her work as a laundress. During the last two months she has been almost entirely unable to work.

Present condition: Very fleshy woman, little over five feet in height, weighing between two hundred and two hundred and ten pounds. Presents an umbilical hernia nearly as large as an adult head, within which portions of the colon can be readily mapped out by percussion. On a rough estimate, about one-third of the hernial protrusion is reducible. What feels like an omental mass can be outlined within the tumor. The hernial ring has a measurement of about six inches in its long diameter and three in its transverse. Owing to omental adhesions the outline of the ring cannot be everywhere distinctly felt.

Operation, October, 25th, 1895, at the Good Samaritan Hospital, morphine and A.-C.-E. anæsthesia. An incision beginning about three inches above the upper margin of the hernia in the middle line, surrounding it on both sides, and terminating a little distance below in the median line, was made. After dividing the abdominal wall, layer after layer, upon either side, the subperitoneal fat was reached and the peritoneum opened on the left side, the finger being used as a guide. Incision was made through the peritoneum upward and downward, completely encircling the ring upon its left side. By retracting the medium margin of the wound the ring was readily exposed to view, and the entrance through it into the hernia of the omentum, parts of the transverse colon, and of the coils of the small intestine could be seen. With the intestine exposed, reducible portions of the hernia were returned to the abdominal cavity, where they were retained with large gauze aprons. To facilitate the return of the adherent portions, the ring and the hernial sac were now divided from within and the adherent contents completely exposed. There were many large and small apartments in the hernial sac. The entire omentum was contained within the sac, adherent in many places, but for the most part converted into an irreducible fibro-lipomatous mass, which was removed, after ligation, in four divisions. The adhesions of the transverse colon were likewise separated without much difficulty. The removal of the hernial sac, together with the overlying integument, was completed by division of the peritoneum in the line of the ellipse upon the right side. Closure of the wound was made by buried silver-wire mattress sutures. The external wound was closed by buried silkworm-gut sutures. To prevent pocketing, three deep silkworm-gut sutures were placed

through the entire thickness of skin and fat layer of the abdominal wall. When completed, the wound resembled an ordinary laparotomy wound about ten inches in length. Time of operation, forty-five minutes.

Subsequent history: The patient made an uninterrupted recovery, except that a fat necrosis developed within the grasp of one of the interrupted silkworm-gut sutures. This was followed by suppuration on the fourteenth day and somewhat protracted recovery. There never was any elevation of temperature above the normal. The patient was discharged well December 8th, six weeks after operation, without abdominal support.

Case II.—Mrs. J. D——, aged sixty years, of Richwood, Ky.; married, mother of six children. She has had an umbilical hernia for many years, and has frequently suffered from colicky pain. She was seized with violent pain, vomiting, and obstipation on April 9th, when she was seen by Dr. Duncan, of Walton, Ky., who recognized the presence of strangulation. When seen thirty-six hours after the inception of the symptoms, the patient presented an umbilical hernia the size of a large walnut, tender to the touch, and irreducible. The integument covering it was very thin, and through it a mass of omentum could easily be distinguished. The usual symptoms of acute strangulation were present.

Operation, under A.-C.-E. anæsthesia. Incision in the middle opening of the sac revealed a well-marked strangulation by a ring one-half inch in diameter. The contents were an adherent mass of omentum, beneath which was found a coil of the small intestine tightly held by the ring. When this was divided, the intestine was readily brought into the wound, and, being found healthy, was returned. The omentum, adherent to the sac wall in a number of places, was removed after ligation of the pedicle. When the sac had been removed it was found that the edges of the ring were very much attenuated, rigid, and difficult of approximation. An incision was therefore made one half an inch above and below the margins of the ring, and this completely dissected out The sheaths of the recti muscles were by this procedure opened and readily approximated. The superfluous integument was removed by two semilunar incisions and the wound closed by deep and superficial sets of sutures. This patient made an uninterrupted recovery, save for a limited sloughing of the fat contained between the superficial and deep sutures. The hernia has not returned.

Case III.—Mrs. S. R——, of Greeley, Col., operated upon at the Jewish Hospital, January 4th, 1895. Patient, aged fifty-nine years, mother of four children, has had an umbilical hernia for many years. She has never had attacks of strangulation, but frequent attacks of colicky pain, gastric disturbance dyspeptic in character, and cardiac palpitation. These are almost always developed after the ingestion of a full meal, and are associated with severe pain in the hernia. At other times the hernia presents nothing indicative of its relation to the gastric symptoms presented.

Present condition: Patient has a small umbilical hernia the size of a walnut. The abdominal wall is densely covered with fat and is pendulous; the hernia is covered with attenuated skin, through which adherent omentum can be outlined.

Operation: A.-C.-E. narcosis. An elliptical incision completely surrounding the hernial tumor and beginning an inch above and terminating an inch below the median line was made. The incision was continued through the entire thickness of the abdominal wall, including the peritoneum. The peritoneum was first divided on the left side, when the omentum could readily be discerned entering through the hernial ring. Since no intestine entered at all, the incision was made through the peritoneum upon the opposite side, and the hernia, together with the omentum, drawn into the wound. The latter was ligated at its point of entrance into the sac and returned to the abdominal cavity. The operation was completed by deep, buried silver-wire sutures and subcutaneous silkworm-gut sutures. The patient made an uninterrupted recovery. She was discharged from the hospital February 10th, 1895. Three months later she developed an abscess about the omental stump, which was opened through the abdominal wall in the region of the gall bladder. With the outflow of pus there was discharged the ligature placed about the omentum. This is the only case in my experience in which the ligation of the omentum has been followed by suppuration.

Case IV.—Mrs. J. C——, Cincinnati Hospital, married. Admitted to the service April 24th, 1896. She has in the last years been very fleshy, and for ten years has had an umbilical hernia, which has, through frequent attacks of colic, interfered with her work as housemaid. The hernia is about the size of a large fist and irreducible. Pressure upon it is painful in places. Intestinal contents cannot be discovered.

Operation, April 25th, 1896, as in previous case. The sac contained almost all of the apron of the omentum, which could not be returned and was removed in sections after ligation with strong catgut. The hernial ring measured an inch in length by three-fourths of an inch in width. The umbilical ring, and all of the overlying soft parts included within the elliptical incision, were then removed and the wound was closed with deep silver and superficial silkworm-gut sutures. The patient made an uninterrupted recovery.

The cases reported have been operated on within two years, a period too short to warrant conclusions as to the permanence of the cures. Nevertheless, it must be borne in mind that in umbilical as in post-operative ventral hernias the visceral protrusion usually occurs within a few months of the operation. In all of the cases the abdominal wall at the wound site is firm, and I hardly look for recurrence. The salient features of the operation as performed, namely, excision of the ring, suture of the recti muscles, and buried metallic sutures, form the basis of my confidence in the results obtained. Should further experience fail to shake it, it is certain that many patients with umbilical hernias can by this method be rescued from what is always a source of great annoyance, and often a direct menace to life.—*Medical Record.*

---

Oil of Wintergreen for Herpes Zoster.—Chambard-Hénon relates a case of herpes zoster cured by oil of wintergreen, used externally. —*Journal de Médicine de Paris.*

## THE TREATMENT OF SPRAINS.

Injuries classified as sprains fall, on closer inspection, under one or more of four headings. These are contusions, ligamentous injuries, synovitis of the joint, and teno-synovitis of the muscles near the injured joint.

The treatment which has been pursued is as follows: The mildest cases have been satisfactorily treated by daily massage and bandaging. I have never used immediate massage in severe sprains, perhaps from a feeling of timidity, but partly because I have seen cases of recent sprain made decidedly more acute from the application of massage in presumably competent hands. At the City Hospital we have facilities for massage, but in my term of service I have limited it wholly in the severer cases to the time when heat and extreme sensitiveness have disappeared, and when it seems to me desirable to stimulate the local circulation. Our hospital out-patients recover more quickly and more completely than before we had massage facilities.

Taking the ankle-joint as a type in acute sprains, I have been able to obtain the best results by the immediate application of wet mill-board strips applied over several layers of sheet wadding and bandaged tightly but evenly. This dressing is left undisturbed, except for additional roller bandages applied outside, for two or three days. At the end of this time, if the swelling has disappeared for the most part, if the sprain was a severe one, a circular plaster-of-Paris bandage is applied from the toes to below the knee. This bandage is split and removed every two or three days to note the progress of the joint. With the subsidence of the acute symptoms massage is begun, and the plaster at once reapplied for twenty-four hours. The plaster is discontinued gradually, to be replaced by a flannel bandage. Douches of hot and cold water are used in connection with massage.

The aim of the treatment is at first to quiet the general and local circulation by general and local rest, and thus to limit the effusion and joint irritation, and then at the earliest moment to revert to stimulating measures and restricted use of the recovering joint.

The immediate application of plaster-of-Paris is objectionable, because in twenty-four hours the swelling subsides somewhat and leaves the plaster loose; or, if the swelling increases, discomfort or constriction may occur.

Half-way measures have little to commend them. Cotton bandages and hot water, however faithfully applied, are but poor makeshifts. Sticking plaster is better, but lacks precision, although affording a partial fixation; and in the ankle, applied as a figure-of-eight bandage, it often affords excellent support. But, in general, it may be said that a sprain is either slight enough to be treated by massage from the first, or severe enough to receive for a day or two, at least, the most complete and efficient fixation.—*Boston Med. and Surg. Journ.*

# MEDICINE.

IN CHARGE OF
N. A. POWELL, M.D.,
Professor of Medical Jurisprudence and Lecturer on Clinical Surgery, Trinity Medical College; Surgeon to the Hospital for Sick Children, and to the Extern Department Toronto General Hospital; Professor of Surgery, Ontario Medical College for Women. 167 College St.; and
WILLIAM BRITTON, M.D., 17 Isabella Street.

## THE INSANITY OF ADOLESCENCE.

SYNOPSIS OF A PAPER BY FRANK PARSONS NORBURY, M.D., JACKSONVILLE, ILL.

Medical Superintendent of Oak Lawn Retreat; Neurologist to Our Savior's Hospital; Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children.

The insanity of adolescence presents a complex psychological problem. So very varied, indeed, are the manifestations of the signs and symptoms that to discriminate the normal mental powers from the abnormal requires a broad knowledge of the human mind both in health and disease. When we remember that the fundamental science of mind is psychology it is evident that if we wish to pursue an analytical study of the mental phenomena found in the insanity of adolescence we must follow, at least, the well-known bearings of the normal psychology.

When the changes of the ego incidental to the period of puberty and adolescence are projected abruptly into the life of an individual, there follows a disturbance of the mental equilibrium which, if not carefully guarded, may result in insanity. These new impulses, these new ideas, belong to the affective mental life of the individual, and unless these impulses and ideas invade "the old circle of thought and become constituent parts of it, thus making his subjective feelings subservient to the altered physical state, there is apt to result a great revolution in the intellect."

The first evidences of insanity will be in the higher psychical functions and in disturbances of the motor-sensory nerves. For convenience in consideration then of the subject, the higher psychical disturbances will first be reviewed, then the motor-sensory, then the nutritive functions.

### HIGHER PSYCHICAL.

Within the past quarter of a century there have been great strides made in the study of the genesis of the mind, from the standpoint of the physiologist. This movement, led by Preyer, has given us the present science of psycho-physics, of which child study is a prominent and growing part. This painstaking and essentially practical method of the study of mental development gives us actual facts observed under actual conditions, and has thus relieved us of that inconsequential metaphysical conception of mind and its growth, which from the time of Plato has stood for psychology.

These methods of study, when applied to adolescence, give us sex differentiations in the higher psychical phenomena, the differentiations of individuals and, in fact, the differentiations of race psychology itself.

The study of the normal psychology of adolescence is but in its infancy; much yet remains to be brought out by laboratory methods of inquiry. However, we know that adolescence is a period that demonstrates admirably Herbert Spencer's definition of mind, that it is composed of feelings and the relations between feelings, for adolescent mental phenomena are largely all feelings. Volition is at high tension, and the emotions while not dissociated from the intellectual states are yet under great strain. Then it is that discrimination from which, Bain says, mind starts, is excited to its greatest. The consciousness of new impressions is expanded so that the minuteness, the delicacy of feeling, is brought out. The native inequality of individuals is more apparent at this time and the mental alertness. so-called smartness, becomes significant.

Then another feature of the normal psychology of adolescence is the retentive faculty, memory. It is at this time that much of the intellectual development occurs. The plastic power of the mind in acquisition is at its height, and this function, which is the highest energy of the brain, submits as never before to mental exercise. While largely self-sustaining and recoverable from strain, the mind can at this time be greatly over-strained and permanent damage result. The constructive functions of the mind during adolescence are especially interesting, the flights from mere repetition to the heights of imagination and fancy are s metimes astonishing. One of the greatest feats of the plasticity of the mind is concentration.

The expenditure of nervous force under normal mental conditions is great. This power when abnormal turns nervous energy into one channel, and, as a result, all other processes suffer.

Emotions are really the battlefield of adolescent revolution. The intense emotions of love, of anger, of power, of superiority, of self-love, of vanity, of curiosity, of activity, of disgrace, of censure, all play their parts in the varied sad scenes of the disease. At no time in the life of an individual are the emotions more alert and quick to respond to impressions without reason than during the period of adolescence. Love is at the height of its glory, and when within the bonds of normal control it brings blessings in its train. It is a passion which is said to be blind, even in the normal, but in the abnormal it runs riot and brings disgrace, dishonor, even murder and suicide in its wake. The amatory passions seem to control the whole aspect of adolescence, and open the way for the ingress of allied impressions.

Love and religion mingle—they go hand in hand because the emotional elements are one and the same. It is a fact proven by the statistics of revivals of religion that it is at this period that more conversions are made than at any other. Emotional prodigality at this time plants the seeds for future disturbances of the easily impressionable. Religion invites introspection which, if not guided by reason, eventuates in great dangers. Socrates recognized that the youth must be urged to exert his powers to go higher than self and not pause for introspection. If "self-consciousness" becomes the dominant emotional demonstration the youth is apt to

become greatly disturbed as to his relations with God and the future, and harm results. Pseudo-piety generally precedes most mental break-downs of adolescence, and it may be considered as a premonitory symptom.

The amatory passion, as before stated, is largely the most prominent affective agent responsible for much of the mental disease of this period. It leads to the practice of masturbation, and when this is engrafted on a mentally unstable or nervous individual, sooner or later its effects will be noticeable.

In certain introspective forms of mental disease we find emotional concentration so intense that all other nervous functions are disturbed. I have seen peristalsis arrested by the affective impressions of melancholy. In fact, the physical effects of concentration are apparent in all cases of the melancholy type.

The abnormal psychology of the higher psychical aspect, then, is to be found in the will, volition, discrimination, agreement and in emotional upheavals.

SENSORY-MOTOR.

The special study of the sensory-motor disturbances of adolescence have not been fully studied, but the researches thus far have shown increased reflexes, intensification of special sense powers in the normal, and in the abnormal when the maniacal form of insanity results.

In the mental disease called katatonia, by Kahlbaum, we may have an insanity quite frequent during adolescence. It is characterized by profound motorial involvement. Melancholia first is evident, followed by maniacal change of longer or shorter duration, after which appear the characteristic rigidity, immobility and anæsthesis. Spontaneous movement is entirely arrested, in fact, profound catalepsy may be noticed. Usually immobility is not complete, but the so-called symptom of negativism is markedly present when we attempt to move a limb. When this is done the muscles antagonistic to the movement become rigid and offer powerful resistance.

If we succeed, however, in moving the limb it will remain in the position we placed it in, indefinitely.

Such patients are given to statuesque attitudes, not artistic, however. This arrested motor function involves the entire system of voluntary muscles, and even the eyelids and vocal cords. Mutism may prevail, as a result, for months, although the patient may be conscious of what is said and attempt to speak. It is remarkable with all this inhibited action, when the patient seems utterly unconscious of his surroundings and remains in this condition sometimes for months, that after those symptoms disappear, and he opens his eyes, can speak, etc., he can recite pretty much all that has happened during this interval. That they have kept account of time, the days of the month, etc., is frequently the case.

I know this to be a fact, from several cases studied and noted during my hospital experience. Vaso-motor and trophic symptoms are usually present during such attacks. The explanation of these motorial phenomena is that there is revolution in sensory-motor centres of the cortex. The disordered function involves both the motor and sensory areas and extends to the trophic centers in the cord. This intricate morbid phenomenon in-

cludes the vaso-motor effects and nutrition. In the words of Maudsley, "The sorrow which has no vent in tears may make other organs weep." The melancholy thus is but the mental expression of a condition of the cortex which the sensory-motor and trophic changes also indicate. It is possible that the theory of the movement of neurone will yet give us a more scientific explanation of this fact.

### NUTRITION.

Nutrition is greatly impaired in profound cases of adolescent insanity, especially of the melancholy type. A neurasthenic condition is present in many of the cases. Digestion is especially disturbed, the tongue is coated, the breath is foul. Imperfect digestion is a factor and constipation becomes of serious importance at times. Bodily weight suffers in both forms: in the maniacal from exhaustion, and in melancholy, from indisposition to eat.

Nutritional disturbances may invade purely central nervous organs and cause arrest of the skull growth and further signs of degeneration extending to the hair, nails, and even the bones themselves.

### CLINICAL DESCRIPTION.

Now the clinical description of the disease is best shown by the recital of several cases illustrating the various types.

CASE I.—The patient, female, aged 19, single, father died insane, grandfather insane. At the age of 16 puberty was well established. She had been more or less capricious ever since, but it was only within a few months preceding her commitment to an insane hospital that her conduct, etc., commenced to attract attention from her friends.

Ethical changes first noticed, a lack of respect was shown her elders, she became pert, self-willed, and would brook no authority. Her conduct next became more turbulent on account of opposition which she received because of her fondness for male society. She would fall in love with every male who would pay her the least bit of attention. This grew worse until attraction for the male sex caused her to become lewd. She solicited men openly on the street. Her conduct otherwise became more degenerate. She would steal and lie, and on account of her stealing she was apprehended and then found to be insane. On admission to the hospital for the insane she burst into maniacal fury, jumped, kicked, swore, destroyed her clothing, exposed her person by denuding herself of clothes. She offered stubborn resistance to everything, would bite, scratch, etc. She was sleepless and noisy. This outburst lasted for some time, but as her physical health improved through treatment, there resulted improvement first in conduct, then in reason, and at last she recovered and is to-day well.

It is to be remarked that the prognosis in such a case is good, if treatment is begun early. To this end the existence of mental disease might be recognized early, and the capricious conduct, the mental aberrations, be attributed rightly to disease and not to the whimsical conduct of girlhood.

It is too frequent, indeed, that physicians snap their fingers with disdain at such cases and say it is nothing; it will all pass away. My experience as a family physician (for I am in general practice as well as

being interested in the special practice of mental and nervous diseases,) leads me to say that the diagnosis of mental disease will not be tolerated in a family, as a rule, until some gross act of impropriety or criminal act impresses them with the fact that something is wrong. An early diagnosis in such mental disease and immediate treatment give a favorable prognosis. Delayed treatment increases the danger of chronicity, alarmingly.

Case II.—This patient illustrates the sensory-motor symptoms as well as the intensity of mental abstraction. Male, aged 22, single, mother insane. He was a college student, and while engrossed in his studies which, by the way, were carried without apparent effort, he became very much interested in a young lady. His devotion was peculiarly distressing to her because of its persistence. She liked the young man, but his attention seemed so utterly at variance with the established customs, that she thought him peculiar beyond reason. He developed jealousy, became somewhat demonstrative, harbored delusions of suspicion, and at last declared that he was confident she was immoral.

He became convinced that she was pregnant, and that she had accused him of being the parent of the unborn child. His vagaries grew and all centered upon sexual thoughts. At last his friends declared he should be treated; especially were the young lady's friends emphatic in denouncing his ideas as purely delusional, which subsequent history found true. He was committed to the hospital, having previously become decidedly melancholy, introspective and inclined to suicide. On admission he presented cataleptic symptoms which became more pronounced, and, ultimately, very profound. For seven months he was in the condition described by Kahlbaum as katatonia. He had to be fed with a tube, nursed in every way. His urine was drawn for weeks at a time, and then again it would involuntarily flow from him. The same condition of the bowels existed. Sensory changes, vaso-motor and trophic symptoms were present, and, for a time, it looked as if death would result. However, he began to improve, and in four months from the cessation of the cataleptic state he left the hospital recovered. To-day he manages a large farm with success, and frequently calls in to see me.

Thus is shown the intensity of mental abstraction, how the whole cortical area, even the spinal cord, was involved in the profound inhibitory disturbances.

Case III.—It is not unusual to note a combination of the melancholy type with the maniacal, in fact, they merge one into the other. In such cases it has been my observation that masturbation is very frequently a factor, possibly in all these cases, if we could obtain full information regarding it.

The following is an illustration: Male, aged 20, a peculiar boy given to introspection, and anti-social in his make-up. Loved solitude and sombre things, given to excessive piety. His condition finally became of such a nature as to attract attention. He seemed afraid, would cry easily and did peculiar things, attempted suicide, feigned epilepsy and injured his brother. He became morose and would not eat, said that he had committed the unpardonable sin, would read his bible by the hour,

could not get forgiveness, etc.; then imagined he had lost his manhood.

He was placed under my care in a general hospital, where for several weeks he improved. His parents thought best to remove him to his home, where he soon relapsed. I suspected that masturbation was a complication, for in my experience such relapses are usually due to this practice being resumed.

The delusions, too, are in line with the insanity of masturbation. This patient is no better to-day than he was six months ago, although a special attendant is with him constantly and every effort is made to keep him from the pernicious habit of self-abuse.

The prognosis in such cases should be guarded for the reason that this practice not infrequently occurs as the result of the disease, and in such cases degeneration is a factor, and terminal dementia sooner or later occurs.

Case IV.—The following case illustrates a type of which ovarian derangement is a prominent symptom, amenorrhœa being present. I believe with Bevan Lewis that the amenorrhœa is coincident with the mental disturbance, and not the cause of it. He says: This period is a great cyclical developmental stage in which the unfolding of the generative stage goes on, *pari passu*, with the changes in the innermost penetralia of the central nervous system. In other words, what is going on in the pelvis and in the brain are but expressions of the same functional nervous disturbance.

The trophic system of nerves is especially disturbed by this nervous upheaval. Again, I have seen in cases of arrested development where up to puberty a fair intellectual development had been attained, that when the period of adolescence is entered upon, there was evident check in development, eventuating in imbecility and arrest in ovarian-uterine evolution.

The case is as follows: Female, aged 17, menstruated once at 16 and not since. Soon after the appearance of menses she became morose, secluded herself, would not eat or speak. This condition persisted for several months, when she suddenly became hilarious, noisy, destructive, impulsive, and would expose herself indecently. She became pert, vulgar, and talked incessantly about love, marriage and sexual indulgence. She endeavored to attract men, even colored men were approached, and every attempt made to satisfy her sexual desires, which indeed became great. She was noisy on admission to the hospital, whistled, pounded on the doors, cursed and used vulgar language. With the improvement of her physical health she became more quiet, but was inclined to be hilarious and restless for several weeks. In due time I hope the excitement will abate, for it usually does and recovery follows, when the patient gains in physical health coincident with mental improvement. The improvement of the physical health without mental improvement should be regarded as unfavorable for recovery. (This patient recovered.)

I could cite other cases, each illustrating some of the peculiarities of adolescent insanity; no one case embraces them all, but time will not permit. Sufficient has been shown to enable me to conclude that:

1. Adolescent insanity is a pure psychosis, dependent upon hereditary

factors and acquired conditions which especially inhibit the higher psychical centres, and later the sensory-motor functions of the cortex.

2. The vaso-motor and trophic centres are involved in this form of insanity.

3. The sympathetic nervous function is disturbed and a result there is apt to eventuate in the female suppressed menstruation or over excitation of sexual impulse, producing nymphomania.

4. That masturbation is a complication which in the male is apt to causes relapses and may determine chronic or terminal dementia.

5. There is no period in the life of an individual more important than adolescence, and all the safeguards which education, morality and religion can throw about this period are conducive to a life of future usefulness for the youth of our land.

[Ed.—We are inclined to think that catalepsy is not as frequently found as might be inferred from this article.]

## NEW YORK VIEWS OF TYPHOID FEVER.

Communicated to *Atlanta Medical and Surgical Journal*, New York, December 15, 1897.

The fact that, like the poor, cases of typhoid fever are always with us, probably explains the degree of interest, even approaching enthusiasm, evoked by the announcement that typhoid fever has been selected as the theme for discussion at a medical meeting. This spirit of interest reaches even to those *fin de siecle* practitioners who ordinarily look with disdain on "general medicine" as not being an up-to-date specialty; and they will even admit, on these occasions, that there are a few topics worthy of attention outside of the domain of surgery and gynæcology. Certainly, such an opinion finds ample justification; for one who listens to a general discussion on the treatment of typhoid fever cannot fail to be impressed with the great diversity of opinion and the almost total lack of guiding principles that have become crystallized in the practice of the medical fathers. Thus, one practitioner of many years and large experience with hydrotherapy will declare, unreservedly, his abiding faith in the Brandt method of treatment, and will be ably seconded by a younger, but equally enthusiastic, professional brother, who confidently asserts that, although a few years ago many of our leading physicians were opposed to this treatment, hardly any can be found now who are willing to oppose it. Another speaker will admit that the "tub-bath treatment is the best routine method in the hospital," but adds, that he is not sure that it has, in itself, been the means of saving many lives. Still another will express his entire disapproval of tub-bathing as a *method* of treatment, and will insist that, both at the bedside and in the post-mortem room, he has observed disastrous results from its employment. After swords have been crossed and honors divided over the matter of the bath treatment, the impartial listener and earnest seeker after the truth is likely to be treated to a sharp tilt between the advocates and opponents of intestinal antisepsis, as a prominent feature of the

management of typhoid fever. After these important questions have been disposed of for the time being, there usually follow a scattering fire and a good deal of skirmishing over the advisability of using alcoholic stimulants, the coal-tar antipyretics, opiates and cathartics.

The foregoing is not a mere fanciful description, but is a picture drawn from real life, and is intended to introduce and, to some extent, explain what follows.

In a paper on methods of typhoid bathing, based on analysis of 200 cases of typhoid fever observed in hospital practice, Dr. J. P. Thornley stated that of forty-eight patients treated by the tub-bath alone, three died, giving a mortality of 6.2 per cent. Relapses and complications were observed in 37.5 per cent. Twenty-six patients received sponge baths, and the mortality was 15.3 per cent. Of the fifty-eight who received both sponge and tub-baths, 13.7 per cent died, and relapses occurred in 55.1 per cent. Of seventeen who received neither sponge nor tub-baths, three died, and these three were really moribund on admission to the hospital. The cases treated by both forms of bathing were of a very severe type, while the others were comparatively mild. In discussing this paper, Dr. William H. Thomson said, that out of sixty-one typhoid fever patients treated by him in the Roosevelt Hospital in four months, only five died, and only eleven had delirium. He attributed these good results to the treatment, which consisted in giving a bath as often as necessary to keep the temperature below 103° F., a purgative dose of calomel and jalap twice a week, large doses of saccharated pepsin and bismuth and a diet of equal parts of milk and lime water. Dr. S. Baruch, who is an ardent advocate of the Brandt treatment, said that as the diagnosis could not be positively made before the fifth day, it should be made the rule to begin bathing all suspicious cases early, and without waiting for a positive diagnosis. He followed Brandt's rule of giving a bath at 65° F., every three hours if the rectal temperature was 102° F. or over, and paid no attention to the patient's protests; but if the chattering of the teeth showed that the patient was really too cold, the bath was discontinued. In discussing the same subject on another occasion, Dr. S. S. Burt stated that he very seldom resorted to cold baths, because he had come to the conclusion that while they lowered the surface temperature and stopped heat radiation, the generation of heat still went on, and consequently, after a short time the body temperature was likely to be as high, if not higher, than before the bath. Dr. William Henry Porter said that he had abandoned the cold bath treatment after seeing the bath powerless to reduce the temperature below 105° F., and after the autopsy had shown in this case a remarkable degree of congestion of the kidneys. In his opinion, the whole treatment of this disease consisted in decreasing toxin absorption and stimulating the glandular organs to activity. So much for some of the opinions regarding this oft-disputed part of the management of typhoid fever.

At one of the meetings of the Society of Alumni of Bellevue Hospital Dr. Condict W. Cutler took up the other aspects of this subject. Of the one hundred cases forming the basis of his paper, seventy had been treated by the heroic methods now largely in vogue, and thirty by a less en-

ergetic plan. In brief, this latter treatment consisted in the use of calomel and quinine at the very outset, and subsequently in the free use of morphine to quiet the nervous system, and of small doses of whiskey to *anticipate* vital depression. The smallest daily dose of morphine that he had used had been one-fifth of a grain, and the largest, two grains. Delirium was quieted by it, and the action of the heart improved; but the drug was contraindicated if there was coma or much stupor already present. High temperature he controlled by sponging with tepid water, followed by frictions. The patient was kept on a diet of peptonized milk until convalescence was assured. In the discussion of this paper, Dr. A. Alexander Smith stated that he was in the habit of controlling marked restlessness by the use of some preparation of opium, or before the eighth day, by combining an opiate with small doses of one of the synthetic coal-tar preparations. He had come to rely almost exclusively on morphine for the control of intestinal hemorrhage, to the exclusion of the ice-bag, which he suspected was sometimes responsible for the recurrence of the hemorrhage. The great danger in this disease is not from the pyrexia, but from the depression of the vital forces; and, therefore, it seems probable that physicians have made a mistake in becoming such slaves to the clinical thermometer. The body temperature is not in itself a trustworthy guide to the use of baths; the physician should take into consideration the condition of the nervous and circulatory systems, and of the skin, and, in private practice at least, the "bed bath" will be found the most convenient and effective. In the opinion of the writer, Dr. Smith performed an important duty when he uttered a warning against the tendency of the medical profession to adopt a too meddlesome plan of treatment. He clinched the argument by citing cases illustrative of what Nature could do in the way of restoring the sick one to health, even under seemingly very adverse circumstances, when not interfered with in her beneficent work by the injudicious efforts of the physician. In continuing the discussion, Dr. Egbert le Fevre said, that in studying the pathological findings, one must be impressed with the fact that this is normally a disease of two weeks' duration, and that accordingly our treatment during these first two weeks is of vital importance. He favored at the outset an eliminative treatment, consisting in the administration of small doses of calomel and of large quantities of water. A case was often made severe by giving too much food. Dr. W. H. Katzenbach also emphasized the importance of the early treatment, by stating that the prognosis depended largely upon absolute quiet and good nursing during the first week of the disease. Unless the physician took pains to secure for his patient perfect quiet, both of body and mind, he had not done his whole duty in this very important respect. High temperature could be safely and conveniently controlled by a warm pack, or by sponging with tepid water. In giving such a sponge-bath the nurse often made the mistake of giving it under the bed-clothes, whereas unless the patient were freely exposed to the air during the bath it was almost valueless.

It is evident from the views here expressed, that medical practitioners in this city are far from being of one mind in regard to what constitutes the most approved treatment of this very important disease. It is rather

difficult to reconcile the statement, that the routine administration of opiates is highly important, with that which claims that the most successful and rational treatment of typhoid fever to-day is essentially an eliminative one. I may here say that we do not hear as much now as formerly about the great value of intestinal antiseptics. Some of the most earnest advocates of this treatment have become tired of waging war with these inadequate weapons against the hordes of microbes, and are now content to use the "eliminative treatment," or such other measures as tend to promote intestinal asepsis. Finally, it must be obvious to all that the claim, already quoted, that but few physicians in New York City are now opposed to the cold-bath treatment of typhoid fever is preposterous.

Ogden G. Ludlow, M.D.

---

Nature and Treatment of Maniere's Disease.—In an editorial in the *Boston Medical and Surgical Journal* of September 30, 1897, after discussing the causes of Meniere's disease, the writer says:

"As for the treatment of this disease, that by large doses of quinine (for which we are indebted to Charcot, who first formulated it from theoretical considerations) is now the most in favor, at least in the French hospitals. It has been a matter of frequent experience since Charcot first published the remarkable results which he had himself obtained from this remedy that full doses of sulphate of quinine administered every day for two or three weeks produce a positive amelioration of all the symptoms. During the first few days of the treatment the head symptoms (tinnitus and the vertigo) are worse, and the vertigo is so intense that the patient must be kept in bed to avoid the falls which he otherwise might receive. The medicine, too, is likely to upset the stomach, so that Gilles de la Tourette advises to prepare the patient by a milk diet before commencing the quinine treatment. It should be the aim to give the patient from seventy-five centigrammes to one gramme (ten to fifteen grains) during the twenty-four hours. This may be given in divided doses, or one-third of the daily quantity well diluted in water after each meal. At the end of eight or ten days the vertigo and tinnitus diminish, in many cases to completely disappear after a few days more of treatment.

"Naturally many obstinate cases are only benefited, not cured, and in all a frequent return to the remedy after a period of suspension is necessary."

---

Tincture of Iodine for Herpes Zoster.—Painting with tincture of iodine has proven very satisfactory for herpes zoster.—*Cleveland Medical Gazette.*

[We should suppose that this would depend entirely on the time at which applied. If used after the very earliest stage it would be simply irritating.—Ed.]

Paroxymsal Tachycardia.—In a recent issue of the *British Medico-Chirurgical Review* P. Watson Williams contributes an article on this topic. After discussing the general aspects of the condition, he states that in his opinion the results of treatment, on the whole, are eminently unsatisfactory in controlling or arresting the actual attacks. The writer has already remarked that in one severe case the only drug that in any way seemed to benefit the patient was digitalis, and that in both cases digitalis had given good results. Bouveret states that digitalis has proved of only moderate value. Oettinger, keeping his patient in bed, found the pulse improved and the quantity of urine increased under digitalis; but Pye-Smith has found digitalis and strophanthus "most disappointing in these cases. Absolute confinement to bed in the recumbent posture for a length of time led to the slowing of the pulse, and often to complete cure." Yet the author's own experience, and a consideration of recorded views of others, tend to the conviction that although digitalis has but a limited action in controlling or aborting the actual attacks, it is the most useful drug for improving the circulation in the intervals between the severe and prolonged attacks. When the mitral valve has become incompetent from secondary dilatation of the heart, when the urine is deficient in quantity and albuminuria has occurred, when anasarca supervenes and the respiratory function is embarrassed, then we shall find that digitalis in some form affords the best chance of restoring the failing circulation and improving the heart generally.

Some have given morphine with advantage—at least, it sometimes calms the patient without cutting short the attacks. Oliver considered he had cured his patient with belladonna.

Caffeine, nitrate of amyl, and nitroglycerin have been tried with no result. Sometimes a strong dose of brandy or whiskey stops an atttack, and in Nothnagel's case the attacks were arrested by deep inspiration.

In several cases faradization of the vagi has been tried, and failed to have any effect; but pressure on the vagi in the neck, and in one case compression of the thorax, would stop the attacks. These proceedings have been tried in other cases, however, and failed.

It is important to attend to the general health, and especially to rectify any gastric disorder; anemia should be treated with iron and general tonics. Tea, coffee, smoking, undue exertion or excitement, and anything which tends to excite the nervous system, should be carefully avoided.

---

Dr. Rumbold, sr., says that the functions of the middle ear muscles are to select and amplify such sounds as the listener desires to hear most distinctly; making it appear that the ears have muscles of accommodation quite analogous to those of the eyes.

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

## THE DIAGNOSIS AND TREATMENT OF MULTIPLE NEURITIS.

BY CHAS. LEWIS ALLEN, M.D.,

Lecturer on Nervous Diseases, Georgetown University, Washington, D.C.

The comparative frequency of multiple neuritis, its varied etiology, its prognosis, favorable as compared to the hopeless outlook in the chronic diseases of the spinal cord, with which it is most liable to be confounded, make its study of interest and importance, as well to the general practitioner as to the specialist. To the former I would more particularly address myself, in asking attention to some points in its diagnosis, prognosis, and treatment, studied in the light of recent advances in our knowledge.

A knowledge of the etiological factors of a disease plays an important part in its diagnosis and treatment, and multiple neuritis is usually divided into different forms, according to its different causes.

With the exception of certain senile and degenerative forms—which differ considerably in their course and in the distribution of the lesion from the other forms—probably all cases of multiple neuritis are due to the presence in the blood of some poison, introduced from without or developed in the body, in a course of a morbid process. The poisons derived from without are definite in character and of known composition. Among them alcohol and lead play the greatest role, but arsenic, mercury silver, and copper among the metals, and carbon bisulphide, nitrobenzol, aniline, and carbon monoxide among the non-metallic poisons, are capable of causing neuritis.

The poisons developed in the body have no such definite composition, or at least we have not yet been able to make out just what their composition is. Among these, that of diphtheria is the most apt to produce a neuritis, but neuritis may develop also as a result of typhus, typhoid, tuberculosis, variola, scarlatina, erysipelas, pneumonia, septicæmia, etc., as well as in rheumatism and diabetes. In lepra, a peculiar and characteristic form of neuritis occurs; while in the very fatal beriberi or kakke, endemic in the East and in Brazil, we have a multiple neuritis, apparently infectious in origin and presenting a well-marked clinical picture, which differs considerably from that with which we are familiar in this country. A malarial form of neuritis closely connected with remit-

tent fever has been described as coming from India and other countries, where severe malarial fevers are prevalent. In American books malaria is mentioned as a possible cause of neuritis, but it does not seem to be regarded as a common one. Possibly a closer study of cases of paralysis of the legs, which occur in the malarial regions of the Southern States, may show that neuritis from this cause is not so rare. Cases of neuritis due to cold are not uncommon. Perhaps they are rheumatic in origin: if not, they are most likely due to the action of some poison, developed in the system as a result of exposure to cold.

A neuropathic constitution is undoubtedly predisposing, and two or more causes may combine to produce an attack. As to the pathological anatomy of the disease, it will suffice to call attention to the fact that multiple neuritis is primarily a parenchymatous inflammation, while neuritis of single nerves is interstitial, confined at the start to the connective-tissue sheath, and involving the nerve fibre proper secondarily only. Multiple neuritis may be acute, but is more usually sub-acute or chronic. The acute cases may run a course not unlike acute ascending paralysis of Landry, or may present the same symptoms, only in more violent form, as the more chronic cases, being accompanied in addition by fever and constitutional disturbance.

The symptoms of multiple neuritis "are of three classes—motor weakness, sensory disturbance, and inco-ordination" (Gowers). According to the predominance of one or another of these, we have a motor, a sensory, and an atactic form of the disease. These symptoms vary in degree in different cases, but are generally combined.

Alcoholic neuritis is by far the most common, and can very well be studied as a type of the disease. It results from the continued use of alcohol, especially in the form of spirits, is a disease of adult life, and is said to be more common in women drinkers. Neuropathic constitution and exposure undoubtedly predispose to an attack. It begins with tingling and numbness in the finger-tips and soles of the feet. Sooner or later this spreads up the limb, and is followed by pain and loss of power, the legs suffering earlier and more than the arms, often exclusively.

The pain is located along the nerves and in the muscles. It is burning, boring, or aching in character, and varies much in degree. The affected muscles are tender and painful on pressure, on account of involvement of the muscle nerves.

The disease shows a tendency to involve special nerves—in the leg, the peroneal; in the arm, the posterior interosseous—supplying respectively the flexors of the ankle and extensors of the toes, and the extensors of the wrist and fingers—homologous groups of muscles, which, when paralyzed, give rise to the "foot drop" and "wrist drop," so characteristic of neuritis.

Any other nerves may be involved in the progress of the disease, those of the extensor muscles suffering most. The "knee jerk" and perhaps other tendon reflexes are lost, or very much diminished; the skin reflexes suffer less. As the disease progresses the muscles atrophy and show altered electrical reactions. In mild cases the atrophy may be slight and electrical reaction only quantitatively altered; but in bad

cases atrophy is great, "reaction of degeneration" is found, and recovery is very slow. Normally both nerve and muscle respond to stimulation by either galvanic or faradic current, and with galvanism the strongest contraction is produced by the negative pole (cathode) at the moment of closing the circuit. When degeneration of nerve fibres is present, however, there is loss of faradic irritability by both nerve and muscle. To galvanism the nerve does not reply at all; the muscle responds, and to a weaker current even, but no longer gives a quick, sharp contraction. It contracts with a slow vermicular movement, and may show greater irritability to the positive pole than to the negative. This change constitutes "reaction of degeneration." If the peroneal group of muscles is alone involved, the patient can walk, but cannot lift his feet well. If the other muscles of the legs are attacked he may be completely paraplegic. Sensory disturbance begins with tingling and numbness in the affected region, and hyperæsthesia and painful sensations are soon added. Later, anæsthesia, more especially to touch, comes on. Temperature sense is little affected. Inco-ordination may occur to a greater or less extent. It is generally combined with motor and sensory disturbance. When it is the chief or only symptom, we have a special type of the disease, the atactic, and to it I would invite attention, as it is the form which above all others may give rise to an error of diagnosis, its resemblance to locomotor ataxia being marked. The idea that inco-ordination of the legs, with disturbance of sensation, was due always to sclerosis of the posterior columns of the cord was universally prevalent until, in 1883, Déjerine published the clinical histories and results of autopsy in two cases, which showed that these symptoms could be produced by lesions of the peripheral nerves, the cord being entirely uninvolved. For this new form of ataxia he proposed the name of "nervo-tabes periphérique," and as peripheral neurotabes (or pseudo-tabes) it is described in English books. Déjerine's cases presented many of the chief signs of locomotor ataxia, viz., inco-ordination, diminished sensibility, pains in the legs, Romberg's symptom (inability to stand with the eyes shut), and loss of knee jerk. The spinal cords were found absolutely normal, while the nerves showed degeneration; and, specially to be remarked, this degeneration was almost entirely confined to the cutaneous nerves, the muscle nerves being but slightly affected. The resemblance to locomotor ataxia is still more striking in the rare cases in which the eye muscles are affected.

In neuritis, besides atrophy of muscles, trophic changes in skin, bones, and joints may occur. Slight œdema and "glossy skin" are most common.

In alcoholic neuritis the general symptoms of alcoholism—tremor, coated tongue, and gastric disturbance—are apt to be present. Aside from delirium tremens, there occur more chronic forms of mental disturbance, often following the course of the neuritis in its extension or improvement. The characteristic psychosis is hallucinatory confusion, with a forgetfulness which lasts a long time, being often as slow to improve as the paralysis. Such is the picture of alcoholic multiple neuritis, and sketches fairly well the symptoms of the disease in general.

Lead neuritis, the next in frequency, has a special tendency to involve

the extensors of the wrist and fingers, and produces the "wrist drop," which when seen alone at once suggests lead poisoning. The long supinator usually escapes. The homologous muscles of the legs are sometimes affected, but not nearly so frequently as in neuritis from alcohol.

Arsenic affects the same groups of muscles as lead, but the legs are more frequently involved and sensory symptoms are more prominent. Mercurial neuritis has been described, occurring usually during a course of mercurial injections for syphilis. The legs are chiefly affected. Neuritis from poisoning by other metals is not common, but when it occurs it resembles neuritis from lead. Neuritis following acute infectious diseases is far more variable in its distribution, and tends to involve a greater number of muscles than the forms just mentioned. Of all diseases diphtheria is the most likely to be followed by neuritis, which assumes here its most dangerous form, having tendency to involve the nerves to heart and respiratory muscles. The palate is usually affected first; the voice becomes nasal, and liquids which the patient attempts to swallow regurgitate through his nose. The eye muscles are next attacked, there is loss of power of accommodation and so of vision for near objects. The muscles which move the eyeball may also show weakness. Next in frequency the limbs are involved; less commonly the muscles of the trunk, neck, and larynx, the heart, the diaphragm, the bladder, and rectum. Neuritis is less common after other infectious diseases, and when it occurs its distribution is not very characteristic. Malarial neuritis is said to affect specially the legs.

Beriberi is an acute infectious multiple neuritis. It attacks particularly the legs and heart nerves, the resulting heart weakness giving rise to anasarca more or less widely distributed. In this country it is practically never seen, except in patients who have recently come from regions where it is prevalent.

Leprous neuritis differs considerably from the type we are studying, and will not be discussed in this paper.

An investigation as to possible cause is necessary, as well to diagnose the disease and its form as to institute suitable treatment. The presence or absence of antecedent infectious disease can usually be learned without difficulty, but it is well to remember that a sore throat too slight to have attracted much attention may have been due to diphtheritic or rheumatic poison, and be followed by neuritis. Alcoholic neuritis occurs not infrequently in persons unsuspected of alcoholic indulgence, especially in women who for years have been tippling in secret. The occupation of the patient should be considered. Lead poisoning is apt to be present in painters, plumbers, and others who work with the metal or its compounds. Accidental sources of lead are drinking-water containing lead, lead glaze on earthenware, and cosmetics. The character of the paralysis has been mentioned. Other signs of saturnism are anæmia, colic, and especially the blue line on the gums. Arsenical neuritis may result from one toxic dose, but chronic arsenical poisoning is not so rare, the chief sources being wall papers and dies—especially some of the aniline colors prepared with arsenic and not properly freed from it. Other metals are rarely a cause of neuritis, but the possibility of their being

should be remembered. Rubber workers are exposed to the action of carbon bisulphide, dyers to that of aniline and its derivatives. When multiple neuritis begins acutely with pains in the limbs and fever, it may be mistaken for rheumatism, unless attention is paid to the seat of pain —whether in joints or in muscles and nerves—and inquiry as to subjective symptoms of tingling and numbness is made. Neuritis differs from neuralgia to the greater persistence of the pain, in its more symmetrical and wider distribution, and in the loss of function, which is soon apparent.

Very acute neuritis may closely simulate acute ascending paralysis. The latter—a spinal-cord disease apparently—attacks the legs, and ascends rapidly to the trunk, showing no tendency to pick out different muscle groups, causes no loss of sensation, and generally proceeds rapidly to a fatal issue. Diffuse myelitis may at times resemble neuritis, as may spinal meningitis. There is usually wanting, however, the symmetrical distribution of neuritis. There is not so much atrophy and less altered electrical reaction. The tendon reflexes are exaggerated rather than lost, as in neuritis, and the bladder and rectum are apt to suffer. Sensation of constriction about the body, "girdle sensation," is common in myelitis, but almost never occurs in neuritis. Poliomyelitis anterior and locomotor ataxia are, however, the two diseases of all others with which multiple neuritis is apt to be confounded. Poliomyelitis, like neuritis, may run an acute or a chronic course. The acute form, however, is by far the most common, and, unlike neuritis, has a special tendency to attack young children. It begins with fever and constitutional disturbance, and loss of power comes on quickly, but sensory symptoms are wanting. There are wasting of muscles and change in electrical reactions, as in neuritis, but the distribution is quite irregular. A few muscles of one leg, both legs, or a leg and an arm, may be affected, or any other combination may occur. The age of the patient, the rapid onset of paralysis, its irregular distribution, and the absence of sensory symptoms are the chief diagnostic points.

*(To be continued.)*

---

Salophen for Pruritus.—A drachm a day of salophen is said to be very efficacious in itching from many causes.—*Medical News.*

---

Furuncles of Eyelid:

| | |
|---|---|
| Tinct. camphoræ | min. xv |
| Sulphur. precip. | gr. xv |
| Aquæ calcis | |
| Aquæ rosæ | āā ℥ ijss |
| Pulv. acaciæ | gr. iii |

—*Medical Record.*

# NOSE AND THROAT.

IN CHARGE OF

J. MURRAY McFARLANE, M.D.,

Laryngologist to St. Michael's Hospital. 32 Carlton Street.

D. J. GIBB WISHART. B.A., M.D.C.M., L.R.C.P.L.

Professor of Laryngology, etc., Ontario Medical College for Women; Lecturer in Laryngology and Rhinology, Trinity Medical College; Rhinologist and Laryngologist to the Hospital for Sick Children, St. Michael's Hospital, and the Girl's Home; Toronto General Hospital 47 Grosvenor Street.

## FAVORABLE RESULTS IN OBSTRUCTION OF THE TRACHEA BY DIPHTHERIAL MEMBRANE FROM THE INTRODUCTION OF CREASOTED OIL THROUGH THE TRACHEOTOMY TUBE.

BY WM. EWART, M.D., F.R.C.P., AND W. A. HUBERT, L.R.C.P., M.R.C.S.,

Physician to St. George's Hospital and to the Belgrave Hospital for Children. House Physician to St. George's Hospital.

The following case is of interest as an instance of recovery from a desperate condition, and it is of some importance as showing that we need not regard cases of tracheal and bronchical diphtheria as beyond the scope of active treatment even after tracheotomy has failed to relieve the obstruction. It may be of use to others in similar emergencies.

A. S., aged two years and 4 months, admitted on October 31st, 1897. Laryngeal stridor and dyspnœa since the middle of the night. Face dusty, lips bluish; temperature 102°; tonsils and fauces red, but no membrane to be seen; nose free; much inspiratory recession of lower intercostal spaces. Tracheotomy was performed, low down, with instant relief; no membrane was coughed up or seen *in situ*; 4,000 units serum were injected.

November 1st. Temperature remained above 101°, pulse 160, respirations 52. Throughout the day the breathing was gradually getting worse, but no membrane was coughed up.

November 2nd. Temperature 99° in the morning, 101.8° in the evening. There was now some inspiratory recession of intercostal spaces. At 4.30 the breathing became very difficult; the tube was changed, an oiled feather passed into the trachea, and oxygen given to inhale, with much relief to the patient, whose color was improved. Dr. Ewart, being informed of the child's dyspnœa, had prescribed creasoted oil (1 in 20) to be dropped into the trachea. Owing to an accident this was not supplied to the nurse, but olive oil was used instead, the oil being dropped from the feather used for clearing the tube. This supply of oil was kept up every half-hour from 4.30 p.m. Still, in spite of the oil, there was no effort at coughing and no membrane brought up. At 6.30 p.m. there was

urgent dyspnœa, the face dark and sweating, the teeth clenched, and much inspiratory recession of lower spaces and ribs. Mr. Eames passed a silk catheter down the trachea twice through the outer tube; each time it was withdrawn covered with membrane; some coughing was set up, large quantities of membrane being expectorated through the tube. Brandy and oxygen administered. 8.30 p.m. 4,000 units antitoxin injected.

November 3rd. Had a fairly good night. At 2.30 a.m. a piece of membrane the size of a two-shilling piece was coughed up; this was the only piece coughed up since the catheterisation. At 9 a.m. the treatment by creasoted oil was begun; a large drop of the oil being introduced into the trachea through the tube every half-hour. Each time this was done cough was set up, and membrane expectorated freely.

November 4th. The temperature had dropped to normal after a good night. Three doses only of creasoted oil of two or three drops each were used during the night, with the same result. The treatment was continued during the day with much success, the membrane coming up easily; the total amount expectorated during the last two days being very large.

November 5th. Breathing easier. No membrane expectorated. At 12 noon the tube was plugged, with very little discomfort.

November 7th. Tube removed; voice returning; child much improved.

November 15th. Wound healed; child practically well. The child was treated internally, with quinine, strychnine, and brandy.

### REMARKS BY DR. EWART.

Recovery in this case was due to the careful way in which the treatment was carried out, and to the timely and skilful catheterisation of the trachea. I had long made it a rule to introduce twice a day carbolised oil into the nostrils as part of the toilet of diphtheria during the acute stage and during convalescence; but the idea of the systematic use of oil first occurred to me whilst writing an article on Plastic Bronchitis for the forthcoming volume of Professor Clifford Allbutt's *System of Medicine*, and it happily came to mind again at the moment I heard of the child's danger. It happened that simple olive oil was used at first instead of the creasoted oil which had been prescribed. We gained experience from this accident which, owing to Mr. Eames' successful operation, did not affect the result. The effect of the olive oil was to facilitate the removal of the membrane by the catheter, when this was used; but the olive oil did not save the child's life, as it failed to set up spontaneous cough or expectoration of membrane, and cannot therefore be credited with having done more than assist the work of the catheter. The quantity of membrane which was discharged during the next two days showed that all danger had not ceased; enough remained or was freshly formed in the air tubes to have led to further obstruction or to pneumonia. The moment, however, the creasoted oil was substituted for the olive oil, cough was set up, and large pieces of membrane were expectorated with conspicuous ease. In this respect this treatment carries out the objects of the time-honored treatment of croup by emetics, but in a more easily regulated fashion.

The direct access to the trachea rendered the introduction of the oil a simple matter, so that it could be entrusted to a trained nurse. Whatever the results may be in future cases, we are glad to think that in this instance there was not even a suspicion of any drawback. The satisfactory effects witnessed suggest that the usefulness of the treatment may not be limited to cases of urgent danger, and perhaps not to cases in which tracheotomy has been performed, and that when tracheotomy has shown that the membrane extends below the larynx its systematic employment might be begun early.

The application of creasoted oil might safely be tried in diphtheria of the fauces, and its action could then be watched with relative facility. Whether it may be possible or expedient to use it as an intralaryngeal injection is a question for future consideration. Our experience for the present is limited to the case narrated, and we shall have to feel our way with the details of the treatment. Dropping the oil into the trachea is clearly better than the sudden injection of a quantity of it. In this way we escape the danger of adding to the obstruction by the bulk of the oil. When creasoted oil of proper strength (1 in 20 in this case) is used this danger is much less likely to arise, since the effect of the remedy is to excite cough and clear the air passages. If due caution be exercised in respect of the strength and of the quantity of the oil used, the publication of the case may lead, it is hoped, to none but satisfactory results.

## THROAT LESIONS IN ENTERIC FEVER.

BY DR. TRESILIAN.

This was a communication on eight consecutive cases within the last two months, four of which exhibited throat lesions.

1. A very severe case in a young man, aged nineteen. He had chronic enlargement of the tonsils, and had an attack of scarlet fever two months previous to the attack of enteric fever. The onset of the latter was fairly sudden, with marked delirium as an early feature. Temperature 104° to 106° in the first week; diarrhœa, sixteen to twenty-three motions daily; and several sharp attacks of epistaxis. He also had three attacks of hæmorrhage from the bowel. The rash of typhoid was well marked, and he had a bad relapse.

At the end of the first week he complained of soreness of the throat and pain on swallowing, the voice became thick and husky, and the patient became deaf. On examining the throat, the fauces and pharynx were found covered with thick shiny mucus. A spray of boric acid and borax was ordered to be used frequently, and the next day the mucus had all cleared away. The condition of the throat was then as follows:— On the right tonsil and adjacent faucial pillar was a circular, shallow ulcer, about the size of a threepenny piece, with a stippled appearance; another similar ulcer occupied the base of the uvulva, on anterior surface; and a third on the anterior surface of the left tonsil. The tonsils and fauces were congested and swollen. The posterior wall of the pharynx was intensely inflamed and raw looking. An examination of the larynx could not be made owing to the patient's condition

An examination of the ears showed slight pink color and cloudy swelling of the membrane. The stippled appearance of the faucial ulcers somewhat resembled that of the lamina cribrosa of the optic nerve, as seen on direct examination. The throat lesions improved on continued use of the spray, and were practically well in about ten days, when the deafness also disappeared. The deafness was considered due to the throat lesions, a specific septic pharyngitis causing a similar condition of both Eustachian tubes and tympani, with swelling of the mucosa of the tympanic cavity, and an obstructive deafness resulting. When the patient's condition permitted it an examination of the larynx was made, with negative results.

2. A young lad of ten years of age, who had, previous to being first seen, complained of soreness of the throat, and had enlargement of the cervical glands beneath the angle of the lower jaw. The throat was normal when examined, but the glands were very enlarged. He subsequently went through a mild attack of enteric fever, with slight continued diarrhœa, the pyrexia lasting for three weeks. When last seen and convalescent the cervical glands were still somewhat enlarged. The glands must have been infected from a primary throat lesion.

3. A young woman, aged twenty-two, who had a sharp attack of enteric fever. She complained of soreness in the throat in the first week and became deaf. The condition of the throat after spraying was one of acute pharyngitis, and the membranes when examined showed a similar condition to that observed in the first case.

4. A young man of twenty-six years of age. In an early stage of the fever complained of soreness of the throat, which was found to be due to an acute pharyngitis. His ears were unaffected.

These cases showed that in enteric fever an inflammatory, and, in some cases, a specific, ulceration of the throat may occur in an early stage of enteric fever, and that at a period before the diagnosis of enteric fever can be easily arrived at—even within the first week. It also shows that in a case in which such specific lesions have occurred, contagion by the breath might occur to those in proximity with the patient. Reference was made to some similar cases recorded by Dr. Watson Williams in his book on "Diseases of the Respiratory Tract."

Mr. Lennox Browne, so far from agreeing with Dr. Tresilian that these cases had no particular inherent interest, expressed the opinion that they enforced a most useful lesson. The speaker had seen more than one case of typhoid with throat lesions which had been admitted to hospital on an outside diagnosis of diphtheria; and if, as had been done, complications in throat and ear could be recorded in eight consecutive cases by one observer, it was reasonable to believe—as his own experience confirmed—that faucial lesions were much more common in typhoid fever than is usually taught, and the reason why it is not taught is that so few physicians of infectious hospitals take the trouble to make a routine examination of the throat and larynx, or of the ear.

Dr. Tresilian made allusion to the remarks of Watson Williams in his book on the danger of contagion from the throats of enteric fever patients to nurses and attendants. He (Dr. Tresilian) thought there was great benefit in cleansing the mouth with alkaline lotion.

## HEADACHES FROM NASAL CAUSES.

Dr. Sargent F. Snow, Syracuse, said that he had selected from his records thirty cases of headache that had been referred to him, and which had proved to be due to nasal causes. Sixteen of these were treated between 1891 and 1894, giving three to five years in which to judge of the results; ten of them showed from ninety to one hundred per cent. relief of their headache. The youngest patient was seventeen, and the oldest sixty-five years of age. A large number were females; sixty per cent. were over forty years of age. Of the sixteen who received a full operative course, twelve reported from ninety to one hundred per cent. improvement from the treatment. Operative work gave the quickest and best results. A little more of the offending overgrowth should be taken away than was necessary to relieve the pressure, because of the tendency to frequent congestions, but not enough to impair the natural functions of the nose. The theory of headaches being due to stasis was supported by several eminent authorities, and should be given due weight. He was of the opinion that recurrent attacks were due to the irritability of the nasal membrane and recurring pressure on sensitive points. The relapses might be due to stasis. If stimulating applications were given once or twice a week, these patients remained comfortable. The best method was to spray the parts with iodol and ether (three grains to the ounce). There was a certain number of cases that could be successfully treated by relief of pressure contacts alone. About seventy or eighty per cent. of cases of hemicrania were due to removable causes located in the nasal passages. In some, on examination, a bluish red or relaxed appearance of the membrane would be all there was to indicate that at times there were points of pressure. These cases did not require operative interference, but certain changes in the habits of life and occasional stimulating applications. Many cases of acute headache could be given at least temporary relief by cleansing out the nostrils and using a spray of iodole and ether, preceded by a light cocaine spray to dull the smarting.

The good result following the iodol and ether spray was much more lasting than from cocaine. Nasal headaches were usually neuralgic or hemicranial in their character. We should not be satisfied with simply securing good nasal respiration, but should secure a free normal passage through the upper portions as well as the lower. It was true that in many cases the middle turbinate pressed against the septum without causing headaches, yet if such a condition existed in a neurotic subject we are very liable to get reflex disturbances, as hemicrania, asthma, or epileptic seizures. Pressure at this point with a cotton-wrapped probe or gauze dressing is often sufficient to cause intense suffering.

---

THE OBSTETRIC BINDER AFTER LABOR.—Jewett believes a firm binder is frequently of material service in the second stage of slow labor especially in relaxed condition of the abdominal wall by furnishing a *point d'appui* for the intra-abdominal pressure.—*Medical Age.*

# PAEDIATRICS.

IN CHARGE OF

ALLEN M. BAINES, M.D., C.M.

Physician, Victoria Hospital for Sick Children; Physician, Out-door Department Toronto General Hospital. 194 Simcoe Street, and

J. T. FOTHERINGHAM, B.A., M.B., M.D., C.M.,

Physician, St. Michael's Hospital; Physician, Outdoor Department Toronto General Hospital; Physician, Hospital for Sick Children. 39 Carlton Street.

## THE SIGNIFICANCE OF INFANT STOOLS.

BY LOUIS FISHER, M.D.,

Professor of Pediatrics in the New York School of Clinical Medicine, etc., etc.

*Stool.*—The stool of a nursling or a baby on an exclusive milk diet should be yellowish in color, smeary or pasty-like in consistency, and have an acid reaction. The smell should be faintly acid but not disagreeable. The color is due to bilirubin and the reaction depends on the presence of lactic acid, the source of which is the milk-sugar. The only gases present are H. and $CO_2$. According to Escherich $H_2S$ and $CH_4$ to which the odor of adult stools is due are not present. There are no peculiar albuminoids. Those existing in mother's milk seem to be entirely absorbed. Peptone exists in trifling amount. Sugar is not present. Pancreatic ferment is absent and sometimes traces of pepsin have been found.

*Mucus.*—Mucus is also present in considerable quantity, also columnar intestinal epithelium.

In the stools of nurslings large quantities of lactate of lime can be found, so also we frequently find oxalate of lime depending on the quantity of oxalate of lime ingested. Uffelmann has noted the presence of bilirubin crystals in the stools of nurslings in perfectly healthy children. Miller, who carefully studied the various micro-organisms in the mouth, found that most of them could again be found in the intestinal canal. He further found that certain germs possessed diastatic properties and were capable of producing lactic acid fermentation. In the milk fæces of nurslings Escherich found two germs; the one he called Bacterium lactis ærogenes (or Bacterium aceticum Baginsky) and the other the bacterium coli commune. In the meconium he found proteus vulgaris, streptococcus, coli gracilis and bacillus subtilis.

*Number of Stools.*—The number of stools during the first two weeks is from three to six daily; after the first month two stools daily is the average; many infants have one, others three stools daily; that is largely due to the excessive quantities of water given to infants. As soon as the exclusive milk diet is changed to the mixed diet we then lose the char-

acteristic infantile stool and they resemble more those of an adult, though remaining softer and thinner throughout infancy, they become darker in color, assume the adult odor, and have more varieties of bacteria than those previously mentioned as found in the stool of a milk diet.

*Reaction.*—Reaction of stools in diarrhœal disease and in health chiefly acid or next in frequency neutral, alkaline stools rare. Green grass stools usually acid, seen in early stage of dyspeptic diarrhœa, color from a pale greenish yellow to grass green. Wegscheider has shown that the green color is the result of transformed biliverdin. The condition in the intestine upon which the transformation of bilirubin into biliverdin depends has been generally regarded as one of acid fermentation. Pfeiffer's experiments (*Verdauung im Saeuglings Alter bei Krankheits-zustaenden*), (*Fahrb. fuer Kinderheilkunde Bd.* xxviii. S. 164) show this former opinion to be wrong. He found that none of the acids formed in such fermentation, lactic, acetic, butyric, propionic, etc., added to yellow stools outside the body turned them green, but made them deeper yellow. But dilute alkaline solutions added to fresh yellow stools turned them green after an exposure of thirty minutes to sixty minutes, and strong solutions turned them first brown, later, after exposure to air, intense green.

Typical green stools can be produced by giving an infant two or three grains of bicarbonate of soda. This I have tried dozens of times. The soda must be given for a few days. This explains Pfeiffer's alkaline theory.

*Typical Green Stools.*—Typical green stools can also be produced by giving small or even large doses of calomel. If, after having given bicarbonate of soda and produced green stools, we give diluted hydrochloric acid in five to ten drop doses, the yellow color will again reappear in a few days. This is also true of rheum. Stools which are pale yellow when discharged, and which afterwards become green, are often seen in disease. They may themselves be neutral or alkaline in reaction. This latter may, however, depend on the admixture of urine. An excess of bile may often cause very green stools.

*Brown Stools.*—Brown stools may be due to changed biliary pigment and to drugs, *i.e.*, Bismuth causes the well-known dark stool; so also tannic acid and all iron salts give the dark stool, which vary from a deep brown to a black color.

Blood from the stomach or small intestine frequently gives the stool a black color resembling tar. Thus a practical point in (*Boas' Diagnostik der Magen und Darmkrankheiten*) is, that the brighter the color of the blood the lower down near the rectum and anus must the pathological lesion be looked for; the darker the blood the higher up must the cause be found, *e.g.*, in the stomach, duodenum, jejunum, etc., if the stool contains black blood. If the corpuscular elements of the blood are wanting, then the presence of blood can only be positively diagnosticated by either a micro-chemical examination or by means of the spectroscope. The presence of red blood corpuscles must always be regarded as a pathological factor.

A brown stool in an infant is frequently caused by a diet of animal food, or by a diet principally of broth. This stool has no distinct consis-

tency nor reaction. In dyspeptic diarrhœa, or in some forms of entero-colitis, we have very offensive stools, and they resemble muddy water; with the latter there is considerable flatus during each movement.

White or light gray stools usually are of a putty-like consistency, sometimes like dry balls on a diaper, sometimes they appear like ashes, usually very offensive, consisting principally of fat. In the latter there is scarcely a trace of bile, or it is even absent altogether.

Mucus is always present in all healthy stools, and is so well mixed with the stool that it does not appear as mucus to the naked eye. Any appearance, therefore, of mucus easily visible should be regarded as abnormal. Mucus is present in every form of intestinal disease. Very abundant in inflammatory conditions affecting the large intestine, more so than in those affections of the small intestine, and especially so in inflammatory conditions of the colon, both acute and chronic.

*Jelly-like Masses.*—Jelly-like masses or shreds of mucus, and where the stool consists chiefly of mucus, shows that the affection is confined to the lower portion of the colon, or that it is located in the rectum. Long shreds of mucus frequently resembling false membrane are frequently found in catarrh of the large intestine. If the shreds of mucus are intimately mixed with the stool, then we must look for the lesion quite high up, and if it comes from the small intestine it is usually stained from bile. If the lesion is low down the mucus is not intimately mingled with the stool.

*Dyspeptic Stool.*—Dyspeptic stool. The first change noticed in the dyspeptic stool is the increase of fat. Often the stool is quite green, and contains small pieces of yellowish white color, which vary in size from a pin-head to the size of an ordinary pea.

Hitherto, from their color they were supposed to be casein lumps. Wegscheider has taught us that they consist principally of fat. Baginsky has shown that large colonies of bacteria are contained in the lumps of fat. Frequently they are so numerous that it looks as though the stool were composed only of these cheesy lumps. They can be easily differentiated from real casein lumps by their solubility in alcohol and ether.

*Fat Diarrhœa.*—Biedert and Demme have devoted considerable attention to this subject. See Biedert (*Fettdiarrhœa im Jahrbuch für Kinderheilkunde*, 1878.) In some children the fæces showed 50 to 60 per cent. of fat whereas the normal percentage in ordinary fæces varies from $13\frac{9}{10}$ per cent. (which is the normal quantity) according to Uffelmann.

Casein is not nearly as common an ingredient of fæces as is commonly supposed, as I have previously stated. Casein lumps can be seen in abundance in the course of diarrhœa, during an exclusive diet of milk.

*Rachitis* is usually first noticed by persistent constipation. This is encountered soon after birth, and from the history we hear that it is of long standing, due to an atonic condition of the muscles. Associated with rickets is usually a large, flabby abdomen, the so-called pendulous belly.

Escherich in (*Jahrbuch fuer Kinderheilkunde, Beitraege zur antiseptischen Behandlungsmethode der Magendarmkrankheiten des Saug-*

*lingsalters)* says: "If albuminous decomposition with very foul, offensive stools exist, these articles should be withheld from the diet and carbohydrates given; dextrine foods, sugars and milk. If acid fermentation is present, with sour but not offensive stools, carbohydrates are to be withheld and albuminous food given, such as animal broths, bouillon, peptones, etc. In the decomposition of milk, the sugar of milk, and not the casein, is usually broken up.

*Proteids of Milk.*—The proteids of milk are so thoroughly absorbed that only small traces of them can be found in the fæces. Normal milk fæces contains large quantities of bacteria, but chiefly two kinds:

1. Bacterium lactis aerogenes (Escherich.)

2. Bacterium coli commune, other germs, especially those of the proteolytic type (*i.e.*, that render gelatine fluid) are not found under normal conditions. Albuminous decomposition and its products, tyrosin, indol, phenol and skatol are not found in milk fæces. But lactic acid, acetic acid and formic acid, and other fatty acids, are present, causing the acid reaction. V. Jaksch found a saccharine ferment in the fæces of children. Baginsky found a peptonizing ferment. The amount of infants' fæces varies, but it has been found that 100 grm. of milk food will produce about three grm. of fæces, according to Baginsky. This is a vital point, but I have found it very difficult to determine, for in most cases the napkins of the infants are soiled with urine plus the fæces, thus adding to the gross weight.

*Guide for Value of an Infant's Food.*—The guide for the proper determination of the value of an infant's food consists in noting:

1. The child's increase in weight.

2. The proper assimilation of food by an inspection of the fæces.

3. The absence of all gastro-enteric disturbances. *a.* Vomiting; *b.* diarrhœa; *c.* constipation; *d.* colic or flatulence.

4. The child should go to sleep, and appear satisfied after feeding.

—*Pædiatrics.*

---

The Treatment of Cardiac Disease in Children.—In the more severe forms of cardiac inflammation, which is the most characteristic feature of rheumatic fever in childhood, opium, digitalis, and strophanthus, with an alkali, are the drugs of most service. The former is best given as nepenthe, in frequent small doses, and it does more than any other drug to relieve distress, lessen dyspnœa, and subdue pain. Alcohol is also a useful agent, as much for its sedative as for its stimulating properties. As a last resort in older children, when the heart shows signs of failure, and the pulse becomes small and irregular, hypodermic doses of liq. strychniæ, an eighth of a drop to one drop, combined with one to three drops of digitalis, given in the same way, afford the most powerful means of resting the flagging heart.—*Treatment, Edinburgh Medical Journal.*

## ANTITOXIN RASHES.

BY FRANK L. MORSE.

(*Annals of Gynecology and Pediatry.* 1897. Vol. X. No. 7.)

The author reports 249 cases of eruptions following the use of antitoxin in 1,972 cases of diphtheria. The rashes seem to depend directly upon the amount of antitoxin injected, children receiving a second and third dose being more commonly affected than those receiving single doses.

If the rash is due to antitoxin there is little or no suffusion of the eyes, no cough, no eruption on the palate, and the initial lesion of this eruption may appear on any part of the body, while in measles the rash appears behind the ears and on the neck and chest, and extends downward. If due to antitoxin it will have disappeared in from 24 to 48 hours, at which time a measles eruption would be at its height.

The rashes due to antitoxin assume various forms. Cases have been observed in which it resembled an eruption of tinea; others where it had the appearance of rose spots, and in two instances the eruptions have been remarkable on account of their character. In one of these it was a true eczema, involving the greater part of the trunk, and also the head. It persisted for about ten days, and then disappeared completely. It was accompanied by scales and crusts, but not by the usual amount of infiltration expected from the extent of the process. The other eruption commenced as a diffuse erythema of various parts of the body, and was quite general in character. It persisted rather longer than usual, but the diagnosis of its being an antoxin rash was never questioned. As it faded, it assumed a marked hemorrhagic type, and over various parts of the body were seen these large black and blue areas, as if due to some external violence. They all, however, faded in a few days.

Combinations of these several eruptions have occurred, and it is not unusual to observe a macular or papular eruption with a diffuse erythematous blush, and sometimes accompanied by an urticaria on the same patient.

A typical erythema multiforme has been observed in a few cases, and an erythema or an urticaria have been also observed, localized at the point of the injection of the antitoxin.

The time of the appearance of the antitoxin rashes has been particularly interesting, and also very instructive when a diagnosis is to be made; especially when the rash simulates an eruption of scarlet fever. The earliest cases appear on the second day after the injection; but it is rather unusual to expect any rash uutil the fourth day, and most of them appear at about the end of the first week or ten days. The latest appearance has been on the twenty-seventh day, as observed in cases staying in the hosptial; but one case has occurred when the patient was discharged from the hospital on the sixth day after entrance, but returned three weeks later with an urticaria, and in two months and three days later with a second well-marked urticaria. Second urticariæ may, of

course, appear at any time; but the experience in the hospital shows that they most likely appear at about the end of the second week, between fourteen and twenty days.

The septic rashes of diphtheria are also sometimes seen, but not as frequently as before the days of antitoxin, and are usually present only in those cases which have gone untreated from the outset of the disease, and are markedly septic on their admission to the hospital. The rash is usually a diffuse general erythematous blush which appears suddenly, thus resembling an antitoxin erythema, or in exceptional cases it is a coarse punctuate eruption, too coarse, however, to stimulate scarlet fever, and in one case it has been hemorrhagic in character. They can usually be differentiated from other rashes on account of the profound septic condition which the patient presents. Following the administration of the sulphate of atropine for its stimulating action, it sometimes happens that a flush appears, usually upon the face only, but occasionally extending so as to involve the whole body. It thus may resemble an antitoxin rash, a septic rash, or an eruption of scarlet fever; but the history of the administration of the drug is an important matter, and will usually decide whether the rash is or is not due to the use of atropine.

---

A Simple Regimen for Obese Persons.—Dr. Cathell reports that he has had more than ordinary success during several years with a plan of treatment outlined below. In his view obesity is due to one or more of the following causes: Congenitally small lungs with a defective oxygenating capacity; eating excessively of all kinds of foods; want of lung-expanding exercise; using alcoholic drinks to excess. Many of the drugs which have a known fat-reducing power exert an injurious action on the other tissues of the body, and if used persistently for any length of time, or in efficient doses, become dangerous to health. While the various obesity cures are so rigorous that few carry them out conscientiously, the treatment of the author is very simple. The patient has only to drink after each meal a glass of the artificial Kissingen water to be found at drug stores and soda water fountains, and on the succeeding day a glass of artificial Vichy water also, half an hour after each meal. This is to be continued week after week until the patient comes down to a normal degree of stoutness, and the waters are then discontinued. While taking the waters the person should keep a weekly record of his weight, always using the same scales, and wearing the same clothing, and should also for his own satisfaction, record his chest, waist and hip measurements. If the loss in weight exceeds two pounds a week, the amount of each water should be made smaller; and if the loss has not equalled two pounds a week, a few teaspoonfuls of lemon juice should be added to each glass of the Kissingen water to increase its acidity, and a teaspoonful of aromatic spirits of ammonia to the Vichy to increase its alkalinity. The diet should be light and contain only small amounts of fat, starch, sugar and alcohol. Moderate outdoor exercise should be included in the day's programme. The mode of action of these waters taken in the manner described is not clear, but their efficiency is too well established to admit of doubt.—*Maryland Med. Jour.*

# MEDICAL SOCIETY REPORTS.

## PATHOLOGICAL SOCIETY OF TORONTO.

An exceedingly interesting open meeting was held, as is the Society's custom, on the Wednesday evening of Christmas week. Among those present on invitation were Professor Adami, of McGill College; Drs. W. H. Ellis, Grasett, Hastings, Bascom, J. H. Ferguson, G. Badgerow, G. S. Ryerson, Montizambert, Cuthbertson, Pattullo, Hay, Price Brown, Patton, A. A. Macdonald, A. B. MacCallum, Silverthorn, D. McGillivray and others, in addition to a very large number of members. The appended programme will suffice to show the "*embarras de richesse*" provided by the Committee. Professor Adami's paper cannot be properly reviewed within the limits at our disposal, but was an excellent resumé of our knowledge of the subject to date, with the original results of special examination of the omentum in 150 consecutive autopsies at the Royal Victoria Hospital in Montreal. His figures suggested the reflection made in his paper that it almost appeared as if the omentum had the power of attaching itself, as if by its own motion, to points in any region of the abdomen or pelvis, where operation or other cause had produced a localized inflammation, with a view to assisting in the effort at localization.

A hearty vote of thanks was passed to Dr. Adami, on motion of Dr. R. A. Reeve and Dr. Fotheringham. A most interesting series of slides illustrating different eye-conditions, especially glaucoma, was shown by Dr. Reeve, by the projection microscope, an instrument that will, in the immediate future, revolutionize the teaching of certain subjects in medicine.

PROGRAMME:

Living Specimen:

Syphilitic enlargement of the tibia in man of 70 years.

Papers:

1. The omentum with its relation to abdominal injury.
   Dr. Geo. Adami, Montreal.
2. Suppurative cholangitis
   Dr. H. C. Parsons.
3. Notes of a case of carcinoma of the stomach with multiple sub-cutaneous metastases.
   Drs. J. E. Graham and H. J. Hamilton.

Card Specimen:

1. Cirrhosis of the Liver.
   Dr. Alex. McPhedran.
2. Varicose veins.
   Dr. Geo. A. Peters.
3. Sarcoma of a testis.
   Dr. Geo. Bingham.

4. Frozen sections through the head and neck in a case of carcinoma of lip and neck.

Drs. G. Silverthorn and F. N. G. Starr.

5. Malignant endocarditis.

Dr. Herbert Bruce.

6. Organs from a case of Leukæmia.

Dr. Geo. H. Carveth.

7. Glaucomatous eyes.

Dr. R. A. Reeve.

Card Specimens:

8. (*a*) Gummata and cirrhosis of the liver.
(*b*) Softening of the brain from embolus in the left internal carotid.

Dr. R. J. Dwyer.

9. Specimens illustrating lesions of bone.

Dr. A. Primrose.

10. (*a*) Carcinoma of cardiac end of stomach.
(*b*) An extremely atrophied stomach.

Dr. J. E. Graham.

11. Heart. From a case of death from thrombus in R. auricle and ventricle and pulmonary artery.

Dr. Gibb Wishart.

12. (*a*) Atrophic cirrhosis of liver with œsophageal and gastric varices.
(*b*) Stenosis of rectum with lipomatosis.
(*c*) Subperitonæel cysts of stomach and intestine.

Dr. H. B. Anderson.

Refreshments.

JOHN A. AMYOT,
*Cor.-Sec.*

---

## TORONTO MEDICAL SOCIETY.

The regular meeting was held in the Council building Jan. 14th, 1898. Dr. T. F. MacMahon presided.

Present: Drs. Graham, Oakley, Wm. Oldright, W. J. Wilson, G. Badgerow, H. Hamilton, Langstaff, Small, A. G. Smith, Kelly, Carveth, Parsons, Bascom, Ross, McKeown, McPhedran, Rudolf, Guinane, Dwyer, Primrose, A. R. Gordon, C. R. Dickson, A. O. Hastings, Eadie, F. Starr, G. Gordon, Webster, and J. Brown.

Dr. G. A. Peters presented a boy aged five, who had fallen and dislocated his elbow, both bones of the forearm being dislocated inward.

Drs. A. Primrose and J. E. Graham discussed the case.

Drs. J. F. W. Ross and W. McKeown reported a case of hysterectomy for rupture of the posterior vaginal wall during parturition, the child having escaped through the tear into the abdomen.

Dr. J. E. Graham read a paper on "The Prognosis in Cardiac Disease." The discussion of this paper was adjourned until the next meeting.

At the meeting of the Society held on the 20th the following programme was carried out:

Clinical report of a case of fatal peritonitis, by Dr. F. Oakley. This was discussed by Drs. Macdonald, McIlraith and Carveth.

Dr. G. Carveth reported a case of apnœa.

Dr. John Noble reported a similar case.

Dr. McPhedran discussed the subject.

Dr. MacMahon reported a case of diphtheritic paralysis; a case of asthma, due to dilated stomach, and a case of puerperal eclampsia.

Drs. McPhedran and Scadding briefly discussed the first case.

Dr. H. H. Oldright reported a case of morphia poisoning.

Dr. Noble reported a case of the same, in which he had given gr. 1-32 of morphia to a child a few weeks old. Recovery followed active treatment.

Dr. Noble reported a case in which a patient took four grains of strychnia and two ounces of laudanum.

## THE TORONTO CLINICAL SOCIETY.

The forty-second meeting of the above Society was held in St. George's Hall Jan. 12th, 1898.

Fellows present: Peters, Trow, Graham, Baines, Spencer, Fenton, Boyd, Garratt, Wm. Oldright, A. A. Macdonald, Chambers, Pepler, Anderson, Ross, Hamilton, Britton and J. N. Brown.

Drs. H. A. Bruce and G. Elliott were elected Fellows of the Society.

Dr. F. Fenton presented for Dr. G. A. Bingham a patient who had been operated upon for umbilical hernia. The result was good.

Dr. F. Fenton presented a patient who had sustained a compound fracture of the skull with loss of brain substance.

Dr. Peters discussed the case.

Dr. Wm. Oldright presented a patient upon whom he had operated for necrosis of the femur; a second patient with compound fracture of both legs; a third with exfoliation of a rib. He related a case of osteomyelitis.

These cases were discussed by Drs. Anderson, Britton and Ross.

Dr. Albert A. Macdonald reported a cast of double ovariotomy for a uterine fibroid. The ovaries were cystic.

Dr. Anderson reported on the condition of the ovaries. One was the seat of a dermoid; the other showed a number of cysts of the Graafian follicles.

Dr. J. F. Ross discussed the case.

Dr. J. E. Graham reported two cases: one of aspermatism, another of neuralgia of the liver.

Discussion by Drs. Anderson, Britton and Ross.

The Society then adjourned.

A PRESCRIPTION FOR ASTHMA.—The *Journal de Médecine de Paris* of April 14th, 1897, gives the following prescription:

℞ Tincture of opium, 1 drachm;
Sulphuric ether, 2 drachms.

Fifty drops every half hour until the patient is relieved.

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.

EDITOR:
JOHN L. DAVISON, M.D.
ACTING EDITOR:
J. T. FOTHERINGHAM, M.D.
ASSOCIATE EDITORS:

*Surgery:*
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine:*
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology:*
J. ALGERNON TEMPLE, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics:*
CAMPBELL MEYERS, M.D.

*Pathology and Bacteriology:*
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat:*
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D.

*Pædiatrics:*
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M.D.

*Eye and Ear:*
G. STERLING RYERSON, M.D.
C. TROW, M.D.

*Genito Urinary Surgery:*—G. P. SYLVESTER, M.D., Business Manager

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* DR. G. P. SYLVESTER, Business Manager, 585 Church St., Toronto.

**The Largest Circulation of any Medical Journal in the Dominion.**

## Editorial.

### OBITUARY.

Both Toronto and Hamilton, and wider circles indeed than they represent, have been recently called upon to mourn the untimely decease of well known and much loved practitioners. Dr. J. H. Burns, of College Street, Toronto, died with tragic suddenness while standing at his telephone—and leaves behind him a memory of cheery *bonhommie* that will not soon fade from the recollection of his wide circle of friends both in the profession and out of it. Dr. G. M. Shaw, of Hamilton, died of pneumonia, with almost equal unexpectedness, and leaves a gap in the ranks in Hamilton that will not be soon filled. Both gentlemen were members of the Council of the College, Dr. Burns having just gone successfully through a somewhat acrimonious contest, which may have been the exciting cause of his sudden decease.

We beg leave to tender to the bereaved families the very sincere condolence of the entire profession.

## ANOTHER MALPRACTICE CASE.

We offer our hearty congratulations to Dr. Armstrong, of Alliston, on the outcome of the protracted litigation to which he has been subjected at the hands of the usual combination of ungrateful charity patient and impecunious and litigious lawyer. The circumstances as reported are as follows, and they justify the assumption that the attempt was being made as usual by the plaintiff to get his case before a jury and get a verdict independent of the merits of the case. As in most such cases, the loss both pecuniary and otherwise to the physician is great and entirely undeserved.

On December 7, 1896, Ellard called in the doctor to attend his wife, Lily Ellard, during child-birth. The doctor came, but as an operation was necessary he asked that Dr. Island, of Barrie, be called to assist. Before Dr. Island came, however, Dr. Armstrong performed the operation himself, and then returned home. The condition of Mrs. Ellard became worse, and although the defendant was repeatedly sent for he did not come to attend her, and she died on the 19th of December, 1896. The plaintiff then sued for $10,000 damages for alleged neglect and non-fulfilment of contract.

The case was tried at the Barrie Assizes in April last, when the defence put in the plea that Dr. Armstrong himself was unable to attend the sick woman on account of illness, and that he had never been paid or tendered his professional fees for attending her, and the plaintiff was non-suited by Mr. Justice Robertson.

Ellard's counsel then carried the case to Osgoode Hall, when the Divisional Court was asked to grant a new trial, on the ground that there was sufficient evidence for the case to be given to the jury, and that they should have been allowed to determine the question of contract. The plaintiff claimed that the evidence fully justified the inference that Mrs. Ellard would not have died had the defendant performed his duty as a medical practitioner.

The judgment of Chief Justice Armour is as follows: "I do not see upon what principle we can relieve against the non-suit in this case. Upon the non-contradicted evidence of the defendant, which was read by the plaintiff and made part of his case, it appeared that the excuse of the defendant for the non-performance by him of the contract was his (the defendant's) illness and consequent inability to perform the contract; and that illness is a valid excuse in law for the non-performance of such a contract as the one cited, as shown by several eminent authorities. The motion must, therefore, be dismissed."

Mr. Justice Falconbridge said: "I concur. I feel the less regret at being obliged to refuse to relieve from the consequence of an apparent slip, because it is manifest that the plaintiff would, in any event, have had great difficulty in succeeding in the action."

## AN INJUSTICE TO MEDICAL OFFICERS.

As a class medical officers are the most long-suffering of men, and it is only when patience ceases to be a virtue that their voices are raised in protest against a regulation or an order.

The Militia regulations distinctly state that no combatant officer shall be appointed to a higher position than that of second lieutenant on joining. Medical officers are appointed either as surgeon-lieutenants or surgeon-majors on joining. The appointment of gentlemen to the rank of surgeon-major over the heads of scores of surgeon-captains and surgeon-lieutenants who have served for years is a gross injustice to these officers. It is bad enough when these gentlemen have served for a year or two, and by the resignation of their regimental superior medical officer, the junior receives sudden promotion, but it is still more unjust when medical officers are appointed to batteries of artillery or cavalry regiments with the rank of surgeon-major without having served a single day in any capacity, and over the heads of all surgeon-captains and lieutenants. The Minister of Militia should give this matter his immediate and earnest attention especially since, as a medical officer, he must well know what the feeling of the medical staff is on the question.

---

Apropos of the editorial we submit the following from the *British Medical Journal*:

### "NON-COMBATANT" HEROES.

In the *World* of December 15th the following paragraph appears: "Letters from the Indian frontier speak in the highest terms of the services rendered by the officers of the Army Medical Staff. To such an extent, in fact, have many of them distinguished themselves that general officers in command have brought their names specially to notice, and it is more than likely that three, if not four, will receive the Victoria Cross for acts of heroism which come well within the terms of the warrant governing that honoured distinction." Not the medical profession alone, but the army of which they are so essential a part, and the nation which they serve so faithfully, have reason to be proud of the officers of the Army Medical Staff. In proportion to their numbers they have among them, we believe, more holders of that most coveted distinction, the Victoria Cross, than any other branch of the service—a circumstance which makes the persistent discourtesy of certain officers of high rank in treating them as "not soldiers" but "camp followers" all the more remarkable. To insist on the fact that a class of men who seem to have greater opportunities than any other of winning a decoration which is awarded specially "for valour" are "non-combatants" appears to show that the military mind is somewhat wanting in a sense of humour, if not of fairness.

---

At the risk of being too reiterant, we reprint from the *British Medical Journal* the appended note, showing what we may expect from

the Victorian Order of Nurses if not specially safeguarded. The very difficulty here discussed was raised last month at our meetings in Toronto, and we were virtually assured that it did not exist. The adroitness and fairness of the comments of the Editor are worthy of all praise.

DISTRICT NURSING ASSOCIATION AND THE MEDICAL PROFESSION.

The development of district or parish nursing in the country and rural towns induces us to offer a few words of counsel to those philanthropic persons, frequently ladies, who control and direct the services of the nurses. The local medical practitioner may be placed in a dilemma because he is not consulted and placed *ex officio* on the committee. Yielding to none in his wish to secure efficient nursing for his poorer patients, he may yet be obliged to ignore the good work that is being done, because the services of the nurses are requisitioned independently of medical advice. The medical practitioner can only regard the independent visits of a qualified nurse as a form of irregular practice, which he is bound to discountenance. The difficulty would be at once removed if it were made the rule that the local practitioners were placed on the district nursing committee, and that a nurse should be sent only at the request or with the consent of the medical attendant. We believe that the omission is due to inadvertence, and we draw attention to these matters because we are convinced that by so doing we are furthering the cause of the home nursing of the sick poor, which in a few instances has been hindered by the want of these simple rules.—*Brit. Med. Journal.*

---

The profession at large is interested in the announcement that Dr. G. S. Ryerson has definitely decided to retire from political life. Regret will be felt that we no longer have in the Local House so staunch and loyal a guardian of professional interests as he has always shown himself to be. He has rendered us immense service, particularly on the occasion of the assault by the Patron element upon the Medical Act. On the other hand, satisfaction will be felt at his return to active work in the practice of his specialty, to which he intends again to devote himself.

---

## THE AMERICAN SOCIETY OF SUPERINTENDENTS OF TRAINING SCHOOLS FOR NURSES.

This important Society will meet for the first time in Canada in the near future, and its proceedings must be of interest to the profession at large. The officers for this year are:

President—Miss Snively, Toronto General Hospital, Toronto, Canada;
Treasurer—Miss Drown, Boston City Hospital, Boston, Mass.;
Secretary—Miss Dock, 265 Henry Street, New York.

The sessions begin at 10 a.m. on Wednesday, February 9th, and will be held in the Lecture Hall (Educational Department), Normal School Building. A short opening address is expected from the Hon. G. W. Ross, Minister of Education.

Papers will be read on the following subjects:

1. How to Obtain Greater Uniformity in Ward Work.
2. Practical Diet Kitchens as part of a Uniform Curriculum.
3. Hospital Diet from the Standpoint of the Hospital Superintendent.
4. Hospital Laundries.
5. How far Training Schools are Responsible for Lack of Ethics among Nurses.
6. The Superintendent of Nurses.

After the close of the Convention, members of the Association will spend some time in visiting the various city hospitals, and other places of interest in Toronto.

Toronto feels honored in being chosen as the city in which this Association will hold its Fifth Annual Convention.

This Association was organized in Chicago, at the World's Fair in 1893. The following year the Convention met in New York, then in Boston, then in Philadelphia, and last year in Baltimore.

It is expected that representatives will be present from all the larger American Schools—about eighty delegates in all.

The completed programme will appear later.

## EDITORIAL NOTES AND CLIPPINGS.

### SYPHILIS.

The Zittmann treatment, latterly much spoken of, consists in keeping the patient in a room at 80° F. and administering certain decoctions according to a prescribed rule. For the reason that he finds a large number of practitioners have difficulty in discovering the really correct method of using this remedy—for this means of treatment is unfortunately generally ignored in surgical text-books, as well as in monographs dealing with syphilis—he appends the details as described in his work on Syphilis.

The course of treatment extends to a fortnight, during which time the patient is put upon a strict diet and regimen. The decoctions and pills are made from the following formula:

ZITTMANN'S DECOCTION NO. 1.

℞ Rad. sarsæ. cont., ℥ iv.;
Sem. anisi,
Sem. Fœniculi, ℥ j, ℈ j;
Fol. senna, ℥ j;
Rad. glycyrrh. contus., ℥ iv.

And in a linen bag:

Sacchar. alb.,
Alum. sulph., ℥ ij;
Hydrarg. subchlor., ℥ j, ℈ j;
Hydrarg. bisulph. rub., ℈ j;
Aquæ Cong., O vj.

Boil gently down to one gallon, strain, and put into four forty-ounce bottles. Label "The Strong Decoction."

ZITMANN'S DECOCTION NO. 2.

To the dregs from No. 1 decoction add:

Rad sarsæ. cont., ℥ij;
Cort. limon.,
Sem. cardam.,
Rad. gleyrrh., ℥j;
Aquæ Cong., O vj.

Boil gently down to one gallon, strain, and put into four forty-ounce bottles. Label "The Weak Decoction."

℞ Hydrarg. subchlor., gr. ij;
Ext. coloc. co., gr. v;
Ext. hyoscyami, gr. ij.

Ft. pil. ij. Label "The Pills."

The patient is kept in a room at 80° F. The diet consists of: Breakfast—Boiled egg or bacon, tea; no sugar or spices. Lunch—Butcher's meat, vegetables; no fruit. Dinner—Soup, fish, poultry.

The evening before beginning the treatment the two pills are taken, and the next four days, at 9 a.m., 10 a.m., 11 a.m. and 12 m., half a pint of the strong decoction drunk very hot. At 3 p.m., 4 p.m., 5 p.m. and 6 p.m., half a pint of the weak decoction cold.

The patient is kept in bed, except for one hour every morning. On the fifth day he is allowed to get up; he may have a hot bath, and dress; and is allowed, if he asks for it, a little brandy or whiskey and soda.

In the evening two pills are administered, the patient starting the decoctions the next day as before. So the treatment goes on until the fifteenth day, when it is discontinued.—*Cooper, in Treatment, April 8th, 1897.*

## THE DANGERS OF CHLORATE OF POTASH.

For many years the medical profession, with but little knowledge of the pathological conditions connected with diphtheritic infection, and with still less information in regard to the influence of chlorate of potassium upon the human body, were in the habit of employing this drug in large quantities in the treatment of diphtheria, some using it because it was supposed to exercise a favorable influence upon the local diphtheritic process, both when it was swallowed and when it was eliminated by means of the salivary glands; others, still more ignorant of its influences, employed it with the ridiculous idea that it was capable of yielding oxygen to the body and so supporting the system; while still others believed that the additional oxygen which it gave forth actually aided in the elimination of the effete products of the disease, and thereby enabled the patient to resist its ravages. With our increased knowledge concerning the bacillus of diphtheria and the pathological changes which its toxins produce in the body, this method of treatment became less and less popular, and finally, when the profession grasped the idea that chlorate of potassium was not the innocent drug that it was thought to be, its use in diphtheria became still more limited. We have reason to believe, how-

ever, that there are still quite a number of physicians who continue to employ it either as a matter of routine practice or because they are unaware of its deleterious influences. The literature of medicine will be found to contain as each year goes by more and more cases in which the abuse of this remedy produces poisonous influences in the body, which are recognized to-day, although put down to other causes years ago. The object of this note is to insist upon the fact that the chlorate of potassium is, next to the cyanide of potassium, the most poisonous of the potassium salts. As an instance of this we may quote a case which recently occurred in Vienna, in which a boy of sixteen who was suffering from sore throat was given a gargle consisting entirely of chlorate of potassium. Either because of misunderstanding of the orders or through inadvertence the patient swallowed a considerable amount of the drug, and death speedily resulted, the inquest revealing all of the usual signs of death from this substance.—*Therapeutic Gazette.*

---

## FATAL HEMORRHAGE FROM THE REMOVAL OF ADENOID VEGETATIONS.

Schmiegelow (*Monatsschrift für Ohrenheikunde*, 1897, No. 3; *Centralblatt für Chirurgie*, August 14th, 1897) reports a case, not his own, but occurring in the practice of a surgeon who had often done the operation without mishap. The patient was a boy, twelve years old, who showed nothing strikingly abnormal beyond a pronounced adenoid habitus and scrofulus glands in the neck. The operation was done without anæsthesia, and the ordinary Gottstein annular knife was used. Without any warning, a sudden gush of arterial blood issued from the mouth and nose. In spite of prompt tamponing and subcutaneous and intravenous saline injections, death occurred in a few minutes. The internal carotid artery was found to have been opened just in front of its point of entrance into the carotid canal of the pars petrosa ossis temporis. The author supposes that swollen glands had pushed the vessel forward so that the pressure of the knife caused its rupture, for it was not cut.

---

Conservatism in the Treatment of Diseases of the Pelvic Organs in Women.—In the March issue of the *University Medical Magazine*, Drs. S. Weir Mitchell, Wharton Sinkler, Charles K. Mills, and others, in discussing the relation of nervous disorders in women to pelvic disease, said: "We have never seen a case in which ablation of the ovaries and termination of menstruation cured an epilepsy, and in all our life have met with only four reflex epilepsies, none of which were from uterine, ovarian or tubal diseases; and we are inclined to think that some at least of the cases classed as epilepsies of ovarian origin are in reality excessively violent hysterical convulsions, and we conclude that insanity is aggravated by the menstrual epoch whether normal or not, but that it is very rarely caused by that alone. A great deal of uterine and ovarian disease should escape the knife by the use of patient medical treatment —no grave surgery of the pelvis should be allowed without medical consultation."

Among the many services done to the Turks by Greece in the last few weeks, not the least is to have given them an opportunity to show how and what they can endure. The *Times* correspondent is much struck with their eagerness to fight and with the difficulty of killing them. He mentions one man whose abdomen was penetrated by a bullet, and who not only kept his place in the ranks till the battle ended, but marched ten miles afterwards. Another man with three wounds—two in the legs and one in the shoulder—continued on duty twenty-four hours, until an officer noticed his condition and sent him to the hospital. Sometimes our alcoholism has been associated with our daring and our endurance as cause and effect, but here are qualities of the same sort in a non-alcoholic nation. Our contemporary's correspondent remarks further on the rapidity with which the wounds heal, and says that medical men attribute it to the abstemiousness of the Turks. Here we should scarcely be able to match the race whose soldiers are ill-clad, ill-fed and who take no alcoholic stimulants.—*The Lancet.*

## Book Reviews.

The fourth edition of the work on Bacteriology by Dr. A. C. Abbott has been received The writer has retained all that was good in former editions and made many valuable additions. The historical section is brief, but contains references to most of the important steps which have served to place bacteriology in its present important position. The section on the place occupied by bacteria in nature is splendidly put, and gives to the beginner a clear idea of the subject. The same may be said regarding the explanation of sterilization. The methods of preparation of the different media are so simply brought out as to appeal to everyone interested. The nutrition, growth, morphology and products of bacteria are explained. The simplest methods of isolation and identification are alone referred to, and these are applied to surgical and post-mortem work in a most comprehensive manner. The pyogenic organisms are dealt with at length, and the gonococcus, the plague and influenza bacilli, and the spirilla are treated of in their morphological staining and culture pecularities and pathogenesis or otherwise, as the case may be.

The cuts of the tubercle bacillus and others are good. The infections by tubercle pneumococcus. and tetragonus are followed out, and methods are given for the differentiation of tubercle from the organisms of pneumonia, syphilis and leprosy. Diphtheria is fully considered. and the typhoid and colon bacilli minutely compared. Elsner's medium and method for the isolation of typhoid bacilli and the serum reaction are fully explained.

The anærobic bacilli are given considerable space, and methods for their cultivation referred to such as may be most simply applied

The section on infection and immunity is terse, but brings out the various theories as to infection, the retention and exhaustion hypotheses, phagocytosis, bactericidal power of blood serum, anti toxines etc., most clearly, concluding with a series of facts as now accepted.

The examination of water and soil, and the experimental work on disinfectants close the work.

Bacteriology is a series of methods, which when properly applied and the reactions intelligently noted have given great results The manner in which Dr. Abbott's book treats of these matters recommends it most highly as a guide not only to the beginner. There are numerous foot notes containing references to literature on the more exhaustive and complex subjects.

# Publishers' Department.

Dr. W. E. Hamill has removed to 88 Yonge St., where the Canadian Medical Practice office will be in future conducted. Among the advertisements in this issue will be found a full page list of offers of practices for sale which will be repeated and revised each month.

---

LIFEBUOY SOAP.—We desire to call your attention to this soap. As a bath soap it has no superior, being neutral, and containing, as it does, great antiseptic properties, it cannot but commend itself to the profession at large. It is now largely in use in the European hospitals, and was lately introduced into many of the Canadian hospitals.

---

AYER'S PETROLEUM EMULSION is comparatively a new preparation in Canada, but has been in use in the United States and England for years. It is devoid of the unpleasant fishy odor of cod-liver oil, and proves about as efficacious, and, like creosote, possesses a tonic action on the stomach, and is also a germ destroyer, and wherever it has been used it meets with general favor by the profession.

---

BOVININE.—There cannot possibly be any better proofs of the value of Bovinine than we find in the reports of the Sound View Hospital, Stamford, Conn. As a general tonic and blood maker, it is highly recommended in all cases of chronic ulcerations, as a local application, ulceration of the stomach and rectum, varicose, ulcers, etc. Dr. Pratt, of Chicago, reports a case of gangrene of the scrotum, treated by iodoform gauze, saturated with Bovinino; result, marvellous.

---

Dr. N. F. Cunningham, Dartmouth, N.S., Lecturer on Surgery, Dartmouth University, Halifax, N.S., used Parke, Davis & Co's. Anti-Diphtheritic Serum in fifteen cases diphtheria last September, with satisfactory results in every case. Last week was called to a case at Waverley, which terminated fatally, owing to the child being in a hopeless condition before the serum was administered. He immunized the four other children with 250 units each; ten days have elapsed, and no symptoms of diphtheria have developed.

---

MASSAGE.—Massage being a very scientific treatment when given by a skilful masseur, but so little understood by the medical profession although advised extensively by them, we take great pleasure in recommending Mr. Thomas J. R. Cook, masseur, 204 King St. West, who thoroughly understands the treatment, having graduated from the School of Massage and Electricity in connection with the West End Hospital for Nervous Diseases and Epilepsy, Walbeck St, London, England. During his seven years' practice in this city Mr. Cook has been very successful.

---

IN SMALL-POX.—Unguentine has proved to be extremely valuable in the treatment of small-pox, as it immediately arrests the excessive burn-

ing and itching of the papular stage, and soothes the irritation in the vesicular stage, and, moreover, from personal experience of Dr. B. F. Neal, of Ellenville, Ulster County, New York, who gave it a very thorough trial during the small epidemic that raged in that town and vicinity during the winters of 1895 and 1896, he found that Unguentine in every case prevented the spitting, and the soothing effects greatly modified the patients' desire of scratching themselves, and the results in all cases were extremely satisfactory.

---

Count Okuma's Wooden Leg.—Ordered from New York, as no one in Japan can make one. It is not often that the Consular service of a country is called upon to secure a wooden leg for a general, but that is what has just happened in the case of General, the Count of Okuma, the prime minister of Japan, says the *Commercial Advertiser.*

The Japanese minister to the United States was instructed weeks ago to obtain the best artificial limb in this country for Count Okuma, and he turned the order over to the Secretary of the Legation, who instructed Consul-General Ucheida to consummate the negotiations. The latter gave an order to the firm of A. A. Marks, 701 Broadway, New York.

---

Medicines for the Klondike.—The E. B. Shuttleworth Chemical Company, manufacturing chemists, of this city, have received large orders for their products to be supplied to physicians going to the Klondike. These orders consist of a very large quantity of compressed tablets and pills. Owing to this convenient method of preparing drugs as medicines, physicians going a long distance prefer having them prepared in this form, as they are more easily handled in transit than liquid medicines.

The above firm is a strictly Canadian concern, making a specialty of manufacturing this form of medicinal preparations. Heretofore, American firms did most of this class of business, but since the Shuttleworth Chemical Company has been established, they have had strong indications in the shape of orders that, all things being equal, the Canadian physicians and druggists are prepared to support home manufacture.

---

Furor Disinficiendi.—*The Berliner Klinische Wochenschrift* writes: Realizing the risk that we run of being the victims of an April joke, still we cannot help reporting the following little history: "In K, a Silesian town of 30,000 inhabitants, several cases of typhoid fever were reported at the Police Department. The protecting angels of K. were up to the occasion, and determined to carry out all hygienic orders most rigidly. They ordered at once that 'all stools should be disinfected without delay.' A few strong policemen entered the disinfected house, and there they compounded secundum artem, a mixture of water and lime, with which the fearless germ-killers faithfully painted all the *chairs*; and, not content with that, they also extended their instructions to the tables, bedsteads, etc. Only one chair, which the nurse had saved for herself, escaped the deluge."

# The Canada Lancet.

VOL. XXX.] TORONTO, MARCH, 1898. [No. 7.

## ORIGINAL ARTICLES AND COMMUNICATIONS.

### A FATAL PNEUMONIA WITHOUT ELEVATION OF TEMPERATURE OR PULSE.

BY

GEO. S. RENNIE, M.D.C.M., L.R.C.S., Edin., L.R.C.P., London, Hamilton, Ont.

G. S., farmer, aged 72.

Family history: good, no tuberculosis.

PERSONAL HISTORY.—Has been a particularly healthy man up to the present time; was laid up with a bad attack of erysipelas in the left arm fifteen years ago. There was some necrosis of the bones of the fore-arm, so that there is only limited movement in that arm; has been working harder than usual in the fields all the past summer. Twenty years ago he was ruptured in the right inguinal region, and five years ago on the left side. These were both reducible. He wore a double truss in comfort until a year ago, when he took to a single one for the left side, as the right herina was retained without the aid of a truss.

PRESENT ILLNESS.—Was at work threshing Thursday, Sept. 23rd, and felt as usual until 6 p.m.; the left hernia suddenly descended and formed a hard lump, the size of a walnut. It gave him much pain, and it was ten or fifteen minutes before he could reduce it, during which time he suffered intense pain. He stopped work and went to bed, the pain increasing gradually in severity.

Since that evening his condition has been practically as follows:—Pain has been very severe, requiring much morphia, it has been felt generally over the abdomen and not localized to any one spot, and only varied with the amount of morphine he received. He vomited before Friday morning and has done so steadily since; the vomiting was unattended by much pain, but came on without much effort on the part of the patient. It was dark in color and of fecal odour, although he could not smell it himself. All fluids taken into the stomach have been ejected soon after. Bowels moved quite naturally half an hour after the descent of the hernia; since then he has swallowed nearly four ounces of castor oil, beside some purgative pills. The oil was usually vomited soon after being swallowed. He was given an enema of soap and water with turpentine on Friday morning, and has had one night and morning since, but there has been no movement of the bowels. Gas has been

brought up from the stomach in considerable quantity, but none has passed out of the bowels.

The doctor who attended him up to this time states that fever has not been present during the illness, and pulse never above normal, no cough, no expectoration.

Admitted to City Hospital September 29th. Six days after descent of hernia.

PRESENT CONDITION—Patient is a hardy man of 72 years.

Tongue—Dry, and coated at edges with white fur.

Expression—Somewhat anxious.

Pupils—Contracted.

Temperature 98; pulse 80; respiration 22.

Arterial sclerosis.

Pulse—Regular, fair volume, tension good.

Heart—Slightly hypertrophied.

Abdomen—Much distended, skin reddened from the effect of turpentine applications, tenderness all over, but especially in left iliac fossa; a loop of bowel is clearly outlined through the abdominal wall, and can be seen and palpated easily; nothing can be felt in either inguinal canal.

Urine—Normal.

A consultation was held shortly after patient's admission and it was decided that an immediate operation is necessary for obstruction of the bowels.

The peritoneal cavity opened; in median line upper portions of bowel distended with gas, filled with fæces and darkly congested; lower portions empty. A very small nuckle of bowel found constricted in left internal ring, and not large enough to extend for any distance into the canal. Internal ring incised and bowel liberated which had been tightly constricted and was greatly inflamed; internal ring stitched with chromicized catgut and abdomen closed and dressed.

Sept. 30th, 1897. Patient doing well, feels comfortable, no elevation of temperature, pulse 80, respiration 20.

Oct. 1, 1897. Patient wants to sit up, takes nourishment well, no pain, bowels moved, rested well, pulse 80, temperature normal, respirations 24.

Oct. 2nd, 1897. At 8 a.m., temperature normal, pulse 100, respiration 24. At 10 a.m, respiration had increased to 40 and patient was evidently very nervous and excitable. About 11 o'clock patient became suddenly cyanosed and died in a few minutes.

AUTOPSY NOTES TAKEN BY DR. FINDLAY.

October 2nd, 1897.

Body is that of a rather poorly nourished man, muscular system not well developed and bones very prominent.

ABDOMEN.—No distension or tympanites. There is an incision in the median line 4½ inches long, between the umbilicus and pubes. On removing the silk-worm gut sutures, the edges of the wound are found to be rather firmly adherent and covered with a layer of fresh lymph; no red-

ness is present and parts are in a very healthy condition. Examination of abdomen shows all organs to be in a healthy condition; no gas or fluid in peritoneal cavity. A small loop of small intestine situated in the left iliac fossa shows a slight amount of congestion and pigmentation. No constriction and bowel is quite patent.

KIDNEYS.—Quite normal.

THORAX.—On opening the thorax the left pleura contains about two ounces of turbid fluid.

LEFT LUNG shows layer of fresh lymph on its surface in spots. The whole of the lower lobe and the posterior portion of the upper lobe are dark in color and non-crepitant. On section the lower lobe shows the condition of grey hepatization and the upper one of red hepatization.

RIGHT PLEURA contains one ounce turbid fluid.

RIGHT LUNG has the same coating of lymph on its surface. The posterior portion of the middle and lower lobes are greatly congested, and on section are in the stage of grey hepatization.

HEART.—Slightly enlarged. Right auricle and ventricle engorged with blood, ante and post-mortem clots in right and left chambers.

The post-mortem examination of this case goes to show that double pneumonia was the cause of death and that the pneumonia must have developed some days before his admission into the hospital, as it was found, to a great extent, to be in the stage of grey hepatization, which must have taken a few days. The patient's temperature was never above normal from the start of his illness until a few hours before he died, when it reached 99½. His pulse never reached 100 until the morning of his death.

If time had permitted, a more thorough examination of his chest would have revealed some physical signs, but an operation was required at once to save his life and a pneumonia was not to be expected with normal pulse, normal temperature, no cough, expectoration or pain, and only slight rise in respiration.

As far as the operation was concerned it was successful, as the p.m. report shows, and had nothing to do in any way with cause of death.

---

## EROSION AND SPLIT OF THE VIRGIN CERVIX.

Read by Dr. J. L. Davison, Professor of Clinical Medicine in Trinity Medical College, before the Alumni Association of the College, April, 1897.

MR. PRESIDENT AND GENTLEMEN,—The few remarks I shall make may be looked upon as a sort of curtain-raiser, though, I hope, not a farce, to the more important papers which are to follow this afternoon from our distinguished guests. I should apologize for not giving you something original. But in casting about for something which might be looked upon as at least partly original, and which should occupy only a few minutes' time, I was unable to select a suitable subject; hence the one you see upon your programme as something, if not original, at least new to most of you. Quite recently, while present as an expert witness at a

trial in which damages were asked from the City of Toronto, I heard Dr. Adam Wright, Professor of Obstetrics, University of Toronto, swear that a laceration of the cervix was undoubtedly caused by childbirth. Dr. Britton, of this city, followed with the same evidence, and, I may say, I was quite ready to make oath to the same thing, had I been called upon to do so, which, however, I was not.

In the case I referred to there was no denial as to the previous birth of children. In the Transactions of the College of Physicians of Philadelphia a few days later, I came across an article by Dr. C. B. Penrose, Professor of Gynæcology in the University of Pennsylvania, which materially changed my views regarding laceration and erosion of the cervix. I was at once seized of the fact that, in the case of a virgin, who had undergone an examination similar to the one made by Dr. Wright, by order of the Court upon the plaintiff, I would have given sworn evidence, in a court of law, which must have incriminated an innocent girl, and this through ignorance, which may, perhaps, be excusable; for, though I have searched through all the text-books in my own and several other libraries open to me in the city, I find no reference to the subject, touhgh Dr. Penrose asserts that a few of the text-books refer to it.

In conversation with several medical men of larger experience than my own I found an equal amount of want of knowledge on the subject; so I considered it would be new to most of you, and so should be interesting. To understand the condition of which I speak, a short resume of the morphology of the cervix, then, will be of use. Dr. Fischel, in 1880, worked this out and presented a paper upon it, from which I take what I think necessary to make clear the pathology.

He had made a series of investigations in the cervix of infants who had been still-born, or who had died soon after birth, and had found a condition which up till that time had been, he says, undescribed by any anatomist or gynecologist that had undertaken the study of erosions. Leopold had, a few years before, read a communication to a German medical paper, in which he stated he had seen such an erosion of the cervix and declared it was an anomaly of the new-born child unrecognized before that time.

In the discussion of his paper, Ahlfield stated that circulatory congestion of the uterus, and, apparently, also, erosions of the Mucous Membrane were of frequent occurrence in asphyxiated infants.

Fishel concludes from the above short notice that neither Leopold nor Ahlfield had made a microscopic examination of these erosions.

Now, let us remember that the uterus and vagina are formed by the union of the lower segments of the ducts of Müller, which ducts are lined by simple columnar epithelium. The theory as to the difference between the Mucous Membrane of the uterus and cervical canal and that of the vagina is, that during intra-uterine life a change begins at each end of the Mucous Membrane.

In the above this simple columnar epithelium which I said lines the ducts of Müller, gradually takes on a glandular type, while in the vagina, beginning at the uro-genital sinus, the columnar epithelium gradually changes into the squamous type.

*Normally* at the time of birth these changes should have covered the vaginal Mucous Membrane as far as the external os with epithelium of the squamous type, with *no* glandular structure in it.

But we find that such development, to such nice lines is not always to be found, and hence on twenty-eight cervices examined he found ten erosions of varying character and size; of these four were from fœtuses still-born at term, two from infants a few days old, one from an infant fourteen days old, and three from infants three, four and five weeks old, respectively.

He found that Ahlfield's assertion regarding asphyxia in connection with erosions had no value as to cause and effect, since five of the children born asphyxiated showed no erosion, while some that died at varying periods after birth did so.

The statement that the dividing line between the epithelium of the vagina and that of the uterus lies at the outermost end of the cervical canal is not always true; for it *may* be situated on the vaginal surface of the cervix, approaching more or less nearly the vaginal fornices.

Indeed, Fischel found it coinciding with the external os in only a minority of cases. Usually it lay *within* the cervical canal 2-3 *m. m.* above the external os.

He sums up that, in thirty-six per cent. of new-born infants the vaginal surface of the cervix from the external os towards the vaginal fornices is curved more or less extensively with a Mucous Membrane, which from the form of its epithelium, from its papillary character, and from its possession of mucous glands and crypts, must be regarded as a direct continuation of the cervical Mucous Membrane.

This aberrant Mucous Membrane is due, as we have shown, to a faulty development, and it is owing to its presence that we have erosions, which are thus readily and naturally accounted for even in the new-born child.

Erosions may occur, indeed, upon a spot normally covered with squamous epithelium, but considering that even in adults the erosions never pass the limits we have recognized, or those of the cervical Mucous Membrane viz: midway between the os externum and the vaginal fornix, it seems reasonable to suppose that, without actual trauma, those women only will have erosions who are predisposed to them by the congenital condition above alluded to.

Having thus shown that congenital erosions are common, and having given, we think, good anatomical reasons for their existence, Fischel goes on to show how the normally oval transversely os, with its lateral commissures may be injured, usually in labor; how these injuries alter its shape and appearance, until the laceration ectropiun described by Emmet is formed with which we are all familiar, having often seen it in women who have borne children, if, indeed, some of you may not have seen it, or what is very similar to it, in the virgin.

I am now able, says the author, to show a photographic representation of the cervix of a new-born infant, which presents an inferior degree of the condition. The separation of the lips does not extend all the way to the vaginal junction, but concerns only the lower two-fifths of the lateral corners. Nevertheless, the two lips, deprived of their commis-

sures, gape open, the crest of one being 9 *m. m.* from that of the other, exposing the cervical surface of both lips for a distance of 5-6 *m. m.*

This shows that a peripheral notching of the cervix is not always a sign of a previous labor, and is of great forensic importance, in that the proof of a former labor can no longer be claimed for such a condition of the cervix. Dr. Penrose gives in detail a case in which the cervix was amputated and submitted to a microscopical examination.

CASE I.—N. S.; white, aged twenty-five years, single. Menses began at fourteen years, occurred every twenty-eight days, and were of four days' duration. She had suffered for five years with profuse leucorrhœa, backache and slight left ovarian pain. She was a well-developed, strong woman. Careful questioning and observation rendered it most probable that she was virtuous.

She had never had local gynæcological treatment.

The ostium vaginæ was virginal. On the posterior margin there was a crescentic hymen, which was not, however, sufficient to prevent coitus. The vagina was small and virginal. The vaginal cervix was mushroom-shaped. The face of the cervix was flat, or very slightly, evenly convex. The face of the cervix projected (like the top of a mushroom) on all sides beyond the upper portion, which corresponded to the stock of the mushroom. The face was round, and about one and a half inches in diameter. The external os was transverse—one-third of an inch broad. Upon the face of the cervix were several scattered patches of erosion.

The cervix was amputated and microscopical examination was made by Dr. Lawrence S. Smith.

It was covered with squamous epithelium, except on the small patches of erosion where cylindrical epithelium was present. Racemose glands (like the normal glands of the cervical canal) opened all over the face of the vaginal cervix, in front, behind and to the sides of the external os. They were found as far as one half to three-quarters of an inch from the external os. These glands opened on the vaginal aspect of the cervix, where it was covered with squamous epithelium, and this epithelium extended to the ducts of the glands, which were lined with cylindrical epithelium. In fact, the vaginal cervix was a glandular structure. He holds that the condition is congenital, and due to the development upon the vaginal aspect of the cervix of these structures, glandular, which are normally confined to the cervical canal.

CASE II.—C. W., aged seventeen years, a modest school-girl of respectable parents. Careful questioning of her mother, father, and family physician rendered it extremely probable that the girl was virtuous. She had never had any local treatment of the uterus. She came to the University Hospital on account of painful and frequent urination. She was etherized and an endoscopic examination of the bladder was made. The appearance of the interior of the bladder suggested tubercular cystitis, though the disease subsequently yielded to local treatment.

While the girl was under ether an examination was made of the vagina and uterus. The ostium vaginæ was very small, and there was a well-formed annular hymen, which with difficulty admitted the little finger. Introduction of the index finger ruptured the hymen. There was a bilateral split of the cervix, which was most marked on the left side.

The depth of the split on the left side was three-eighths of an inch. There was no ectropion. There was an erosion surrounding the os. The uterus was in the second degree of retroversion. The integrity of the hymen was not regarded, because it was thought that retroversion would require correction. There was no leucorrhœa.

Now, this case as shown by the plate is one which I think so closely resembles a cervix laxated from abortion, miscarriage, labor, or possibly some other trauma, such as dilatation, that the majority of practitioners would not have hesitated to pronounce it due to a previous labor, though it was an undoubted case of congenital split. The importance of the condition is great from a jurists' point of view. I have never seen such a split in a virginal os, and shall be glad to hear the experience of those who have had more experience in gynæcological work than I have.

---

THE FUNCTION OF THE HAIR IN MAN.—Exner has published in a recent number of the *Wiener Klinische Wochenschrift*, an article on this interesting subject. He states at the outset that the disposition of the hair on the different parts of the body always serves a definite object. The study of the descent of man and of embryology has shown that our ancestors were entirely covered with hair, as are the anthropoid apes. According to Darwin the gradual disappearance of the hair is due to the repulsion felt by women for hairy men, and their liking for the opposite; that is, to sexual selection. In the same manner he explains the exaggerated development of the hairy scalp in women, and of the beard in men, for in women the long hair and in men the beard have always been considered as attributes of beauty.

As to the physiological functions of hairs it is admitted that they are modified sense organs, which have lost all connections with the nerves. It is probable that in primitive man the distribution of the hair upon the body was irregular, and that the length, color, structure and thickness of the hair varied with functions for which it was intended. The hair which has been left upon the body in the process of evolution has been left there for a definite purpose. Certain hairs serve as organs of touch, notably the eyelashes, the bulbs of which are surrounded by a network of nerve fibres, and in a less degree the hairs of the eyebrows. Both these serve to protect the eyes; for being sensitive they give warning of danger, so that reflex closure of the lids is produced. The eyebrows also prevent drops of sweat from running into the eyes, while the eyelashes keep out dust. The eyebrows and lashes also serve a purpose in sexual selection. The down which covers the body is also endowed with tactile sense; the hair in the region of the genitals and anus being the least sensitive. A thick growth of hair is also found in those parts of the body where friction must take place between contiguous cutaneous surfaces as in axillæ, groin, perineo-scrotal and perineo-vulvar regions. By experiment with pieces of skin covered with hair, Exner has shown that the hairy covering markedly diminishes the friction of the cutaneous surfaces.

In animals the hair serves to maintain and regulate the heat of the body, but in man the hair of the scalp alone serves this purpose. Hair is itself a poor conductor of heat, and retains air, also a poor conductor, in its interstices.—*Boston M. and S. Jour.*

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

## IS NOT THE MORTALITY FROM SURGICAL DISEASE LARGER THAN NECESSARY?*

BY CHARLES McBURNEY, M.D., NEW YORK.

With anæsthesia, asepsis, and greatly enlarged and improved operative surgery, the immediate danger to life from surgical interference has very greatly diminished, so that increased confidence has become established in the minds of surgeons, physicians, and patients that few cases of surgical disease can reach such an advanced stage as entirely to preclude the possibility of relief by operation. And it is true that many conditions which formerly were necessarily fatal because they were considered to be beyond the reach of surgery are now safely operated upon and more or less completely relieved.

Even partial success in these desperate cases is a very proper source of pride to the surgeon, and each one stimulates him to still greater effort to save those who are nearly moribund. The more desperate the condition and the greater the risk, the more intense his interest, provided the possibility of success by care and skill exists. This feeling is to a certain extent shared by the physician, who now, much more frequently than in former times, calls upon the surgeon for aid, even in very desperate conditions. In this way every surgeon becomes familiar with cases for which he can do little or nothing, because the disease has already gone too far.

During the last few years I have been especially struck with the rapidity with which many cases of surgical disease advance from a condition that is entirely curable to one that is entirely incurable, or from one that can be completely and radically treated to one that can be only partially relieved. Probably almost all surgical cases have their time limit, before which with proper treatment complete recovery can be assured, and after which, at least with our present resources, no efforts can be entirely successful. Exactly what this time limit is in each individual case we do not accurately know, but that there is such a limitation which is well

* Paper read before the Practitioners' Society on Friday, November 5, 1897.

worth our constant thought and study I am firmly convinced. Take, for instance, a case of strangulated hernia. Is there not undoubtedly a moment up to which the possibility, after relief of the strangulation, of a return of circulation in the involved gut still exists, and a moment immediately following when such complete re-establishment of the blood current becomes impossible? Or, in a case of progressive septic peritonitis, is there not a sharp limit to the time within which the removal of the primary source of the sepsis and of its local products is capable of putting an end to the disease? And does not after this limit immediately begin a period when such a condition of general sepsis is established as entirely precludes the possibility of recovery? Or in a case of carcinoma of the breast, is there not a brief period during which the disease is absolutely local and so open to radical cure, and immediately after this a period when invasion of lymphatic vessels renders operative work only palliative? As further instances I would enumerate carcinomata and sarcomata in many different parts of the body, cases of bowel obstruction due to whatever cause, all wound infections, and especially suppurative diseases involving or threatening to involve the peritoneum. All of these diseases, with certain rare exceptions, when old age or complications of various kinds render surgical treatment inadmissible, are at the proper time susceptible of complete and radical cure. In other words, there actually is a time limit before which death can be averted, and after which death is, immediately or remotely, inevitable.

The question that I would raise is: Do we to-day, with all our eagerness to improve the results of our surgical work, devote nearly enough attention to the limit of time when perfect surgery is possible?

Even leaving out the question of life and death, what shall we say in regard to the extension of disease from one tissue to another, calling at a late period for a much more extensive or mutilating operation than would have been required but a very short time before?

What an enormous difference between a case of strangulated hernia operated on at a time when a complete operation can be done and the hernia radically cured, and a case operated on at a later stage, when gangrene of the gut has occurred, calling for resection of the intestine, followed by intestinal anastomosis or a permanent artificial anus! Compare two cases of appendicitis, one operated on in the period of quiescence after the first attack, and the other operated on during the second attack, when suppurative peritonitis renders a wide-open wound necessary and a large bulging hernia naturally follows. Besides these more marked instances, many others could be given in which the transition from simplicity to complication is less clearly defined. To-day a diseased joint may be safely treated by resection; in a week amputation will be necessary to save life. In the case that I presented to-night, there was a prolonged period when simple extirpation of the tonsil would have been sufficient. When the patient came under my care, the disease had extended so far on to the lower jaw that it was necessary to sacrifice the whole of the ramus. The probability of inoperable recurrence of disease in this case is much greater than it would have been had the operation been done two or three months earlier.

It is clear, of course, that the mortality from surgical disease would be very much diminished if all cases could be subjected to treatment before the time limiting the possibility of perfect cure had been passed. The responsibility for not allowing this limit to be passed is then very great, and deserves the fullest appreciation. That in many cases the limit cannot at present be accurately defined is undoubtedly true, and that it will even be thoroughly understood in all cases is not probable. It is easy enough, however, to appreciate the initial stages of many surgical diseases, and knowledge of their natural history should enable a moderately careful professional observer roughly to anticipate the limit before which treatment may be safe and perfect. A natural comment on these observations might be made, that they are trite enough, and that every one knows that, as a rule, the earlier in any surgical disease proper treatment is begun, the more secure will be a completely favorable result.

The point that I wish especially to make is that the sense of responsibility in selecting the time for surgical interference is in many instances not sufficiently acute, and that delay, in some cases of a few hours, in others of days, and in others of weeks, actually directly leads to partial or complete failure, or even to death itself. It is not always easy to decide upon whom this important responsibility rests. Sometimes the surgeon himself is at fault; sometimes, and not infrequently, the responsibility for fatal delay belongs to the medical practitioner who first has charge of the patient; sometimes the division of responsibility among too many persons leads to the unfortunate result; and often enough no one is to blame but the timid patient and his ill-advising friends. I cannot but believe that many of the obstacles to complete surgical success could be removed, and the mortality from surgical disease largely reduced, if the grave importance of selecting the early stages of disease for surgical interference was more clearly realized. Failure to select the most favorable opportunity for surgical interference is responsible for a very large part of the mortality following surgical disease.

## TREATMENT OF ACUTE PROLAPSUS ANI.

Acute prolapsus ani occurs frequently at childbirth, but as the patient has to keep her bed irrespective of the anal trouble the condition does not assume so much importance as when the sufferer is an active man of business, to whom the time and rest necessary for recovery are serious matters. A succession of these acute cases in many respects similar led me to adopt a treatment which has given encouraging results. The pathology of the condition appears to be a slipping or forcing down of the mucous membrane investing the sphincter and of the mucous membrane immediately above it. Spasm of the sphincters, impeded venous return, and edema result in the formation of an elastic and exceedingly tender, livid or purple swelling occupying either a portion or the whole of the circumference of the anal aperture.

The swelling can be returned above the sphincter without much difficulty by the finger, but in the course of a few minutes in many cases

the prolapsus has recurred. The application of heat or of cold in the form of an ice compress relieves the discomfort, but does not effect a cure or materially alter the size of the swelling. Astringents, either in the form of an ointment or of suppositories, I have found to be useless. Regulation of the bowels and the recumbent position are necessary, but a week often passes before nature brings about recovery.

It is obvious that if the prolapsus could be kept up for a few hours a speedy cure might be anticipated, and this led me to employ pads and a T bandage, but it was almost impossible to prevent the descent of a small swelling in this way owing to the awkward situation in the hollow of the buttocks. Under these circumstances, and in the absence of thrombosis, which would call for incision, I have successfully used as a pessary a full-sized Tait's cervical dilator. After replacing the prolapsus with the finger the vulcanite uterine dilator is lubricated and inserted for one inch up the rectum, and is retained in position by a collar of dentists' wax (Stent's composition) supported by cotton wool and a firmly-applied T bandage.

The pessary not only prevents a descent of the swelling while in position, but by its pressure it favors the absorption of the edema, and it empties the engorged veins; it should be inserted at night and retained until the following morning. This treatment I have found to bring about a complete cure; there has been no tendency to relapse, and the patient has been able to rise and resume his occupation without discomfort. Olive-shaped pewter pessaries have been used for this purpose, but they are dependent for their position and retention upon the action of the sphincters, which cannot be relied upon in these cases. In the chronic condition of prolapsus ani arising from atony of the levator and sphincter ani muscles much benefit cannot be expected from treatment by pessary.

The following case was the first one treated by me in this way. June 22, 1897, a man complained that for two days he had been in pain from a swelling which he took to be a hemorrhoid. On examination a tense, bluish, semi-lunar swelling was found occupying the right margin of the anus, the mucous membrane being continuous with the skin at the outer circumference. The patient stated that he had pushed up the swelling repeatedly, but that it always returned in a few minutes. This I found to be the case. I then gave him a full-sized Tait's dilator 2¾ in. long, and ¾ in. in greatest diameter, and conical in shape, for which a collar was made as described above so as to grasp the pessary thus improvised at one inch from its point and prevent it from slipping entirely into the bowel. The patient was directed to return the prolapse when in bed, and immediately to insert the pessary well lubricated and supported by a T bandage; he was also strongly advised to remain in bed on the following day until seen by me. Next morning, however, I received a note to the effect that he felt quite recovered, and I heard afterwards that the pessary was worn until 4 a.m., when it slipped out, but the prolapse did not show any tendency to return, and has not done so up to the present time.

SUBPERITONEAL LIPOMA MISTAKEN FOR AN INCARCERATED HERNIA.—Dr. Leonard S. Rau presented a lipoma removed from a stout woman of forty years, who had, twelve years ago, after a confinement, first noticed a small mass in the groin. When this mass protruded much she had been accustomed to reduce it by digital pressure, but on September 20, 1897, for the first time it could not be reduced. On September 23rd, when first seen by him, it was still unreduced. It was hard and about the size of a hen's egg. It could not be reduced by gentle taxis, so immediate operation was advised. Her general condition was excellent. The case was believed to be one of incarcerated inguinal hernia, and from the denseness of the mass it was assumed that the sac was very thick. He operated the same afternoon, and found the tumor surrounded by a thick capsule. The tumor was attached by a very long pedicle of peritoneum, which passed into the abdominal cavity. He carefully followed it up to the uterus, and positively excluded an ovarian hernia. The pedicle was ligated, the tumor removed, and the wound treated as in an ordinary Bassini operation. The wound healed by primary union, and the patient was allowed up on the tenth day. The mass measured six by five centimetres, and presented the appearance of fatty tissue between masses of fibrous tissue. The tumor was reported by Dr. Elsner to be a pure lipoma.

Dr. Rau said that he had been unable to find more than a few reported cases of subperitoneal lipoma. As a rule, the prognosis was good, and treatment consisted in removal of the tumor. The chief points of interest in the case related were: (1) the ability of the patient to reduce the tumor for so long a time; (2) the fact that it finally became irreducible; (3) the fact that, owing to the existence of the long pedicle, it must have floated free in the peritoneal cavity when pushed back; and (4) the differential diagnosis. The irreducibility was probably owing to an increase in the size of the tumor.

---

SURGICAL SHOCK AND HÆMORRHAGE.—Chase (*Am. Jour. Obst.*) maintains:—

1. The treatment of shock should be preventive and curative, and to a large degree the indications for the former define the lines of treatment in the latter.

2. The proper exhibition of preventive measures includes a careful study into the functional activity and organic status of all important organs, and such treatment by hygienic, dietetic and therapeutic measures as will elevate the standard of bodily and mental health to a degree in which the maximum power of resistance may be produced and maintained.

3. Special emphasis should be given to lithemic and uremic excretion, and the condition of the circulatory and nervous systems.

4. Knowledge as to inherited power of resistance to and recovery from serious diseases and accidents is of the highest value in determining the course of procedure and estimating the chances of recovery after capital operations.

5. A supply of facilities and drugs for meeting all emergencies should

be in constant readiness, with exact knowledge for the indication, dosage, physiologic and therapeutic effect of special heart tonics and stimulants, which include strychnin, digitalis, spartein, nitroglycerin, brandy and codein.

6. Limit the time of an operation to the shortest period compatible with thorough work and proper technic.

7. Save your patient from the shock of fear to the utmost, and in selected cases proceed to operation without informing the patient of your purpose.

8. In shock with hæmorrhage supply the volume of venous and arterial loss by direct transfusion of normal salt solution into the patient's vein.

9. Bear in mind the influence position has on the circulation under both shock and hæmorrhage, especially in anemic conditions of the cerebro-spinal nerve-centres and the heart.

---

There are few things without their uses in this world, and we now rejoice to find that the burglar has his uses as an involuntary agent in a surgical operation. Professor Brouardel, in a recent lecture, related the following case: A man had a pharyngeal abscess so deeply seated that his medical attendant was afraid to meddle with it. One night a burglar broke into the house, and on the sick man calling for help tried to throttle him. The abscess burst, deluging the burglar with pus and causing him to make a rapid exit. His intended victim, on the other hand, experienced instant relief, and made a rapid recovery.

---

A curious story in relation to hereditary suicide comes to us from Paris, which we give on the authority of Professor Brouardel. A farmer killed himself by hanging, leaving seven sons and four daughters. Ten of these eleven children, after they had each brought up families, took their own lives, and their several offsprings also committed suicide by various means and at various ages. The remaining survivor of the original eleven children is now a man sixty-eight years, and is supposed to have passed the probable age of his family's suicidal tendencies—at any rate, it is only charitable to assume so.—*Health.*

---

## SURGICAL ITEMS.

I have no patience with the surgery which removes ovaries because they are too hard or too soft, or too big or too little, or because they are disabled by adhesions. My office boy can remove ovaries and tubes, but it requires the most profound surgical erudition to know what ovaries and tubes we can save, and it is that sort of skill in which the real benefactor of mankind delights.—*Norris.*

Where a large vessel is injured in an operation by a transverse division, not exceeding two-thirds of its circumference, the surgeon can resort to immediate suture without resection, and, if the field of operation

be aseptic, can feel more certain that he will have union of the vessel and continuation of the current than he could where he sutures the intestine as for the resection of the bowel. The importance of this concerns surgeons more in the treatment of aneurisms.—*J. B. Murphy.*

Where we have an isolated tumor of the brain, which has, by pressure, caused considerable displacement of tissue, or if we have a blood clot inside of the brain from injury or from disease, we will generally find upon opening the dura a movement of the foreign body towards the surface of the brain. If, then, we make an incision down to the spot through the brain substance, the natural impulse of the brain will tend to cause the extrusion of the foreign body, and, whenever .possible, I prefer to allow the natural processes to throw out this foreign body, instead of making prolonged incisions in an effort to remove it.—*Macewen.*

The local conditions should be given nearly as much, if indeed not equal, prominence with the general condition in our decision of "When to Amputate." When in doubt, the wise surgeon, like the wise navigator, proceeds cautiously, and only when he is sure that he is right does he push boldly ahead. When applied to amputations, this principle means, to my mind, that when the line of destruction is positive and known, with general conditions permitting, we should amputate, but when the vitality or usefulness of the part, or the condition of the local tissues, is questionable even with favorable general conditions, we should postpone our mutilating operation until we are able to arrive at a safe conclusion.—*Bouffleur.*

I should lay it down as a rule that wherever a lesion of the large intestine demands a suture the line of union should, if possible, be supported by a thick layer of omentum. Even when the wound is on the serous surface its union will be made more secure, but when it is on the attached surface, where there is no peritoneum, the omental splint becomes indispensable. In wounds of the small intestine, which are disposed to heal readily, this procedure is not so necessary, and yet even here I should feel more safe from accident with this additional safeguard. In resections of the stomach, which are so liable to prove fatal from stitch insufficiencies, it would seem to me that the use of omental splints applied all around the sutures would add greatly to the safety of those operations.—*T. A. McGraw.*

---

FOR TAPEWORM.—

℞ Pomegranate root bark, 4 drachms.
Pumpkin seed, ½ drachm.
Powdered ergot, ½ drachm.

Boil together in eight ounces of water for fifteen minutes and strain.

Rub two minims croton oil with two drachms powdered gum arabic; then add one drachm of male-fern and make an emulsion with the foregoing decoction. The whole at one dose.

# MEDICINE.

IN CHARGE OF

N. A. POWELL, M.D.,

Professor of Medical Jurisprudence and Lecturer on Clinical Surgery, Trinity Medical College; Surgeon to the Hospital for Sick Children, and to the Extern Department Toronto General Hospital; Professor of Surgery, Ontario Medical College for Women. 167 College St.; and

WILLIAM BRITTON, M.D., 17 Isabella Street.

## THE TREATMENT AND PROGNOSIS IN GRAVES' DISEASE.

BY WALTER B. GEIKIE, M.D.C.M., D.C.L.,

Dean and Professor of Medicine, Trinity Medical College, Toronto, Canada.

This short article is prepared solely with the view of eliciting from medical men who have met with cases of exophthalmic goitre in their practice, the results of their observations regarding many points of interest in connection with this curious disease. I do not intend to give a systematic description of the affection in question. This can be found in any good modern text-book. Described many years ago by Parry, Basedow and by others more recently, it is much better understood and more widely known than formerly.

Opinions differ radically as to its real nature. The best modern authorities regard it as a pure neurosis, and functional only in character, although organic changes often develop during its course in the heart, thyroid gland and elsewhere. Some still speak of it as due to changes in the medulla oblongata; others, again, look upon functional and structural changes in the thyroid gland as the real cause of the malady. My own experience inclines me to view it as a neurosis pure and simple, although marked and characteristic structural changes supervene during its course, and may become permanent. Probably in the near future we shall learn more as to its exact nature. Already, it is satisfactory to note that cases are now far earlier recognized than formerly, and that their treatment is more successful.

From their first appearance its special features attract attention. These are few in number and easily borne in mind: 1. An unusual and more or less constant rapidity of the heart's action; 2. The early presence of more or less protrusion of the eyeballs; 3. A marked enlargement of the thyroid gland; a tendency to tremors or tremblings under very little, and sometimes no excitement, although this always increases it. It is not surprising that these indications of exophthalmic goitre, which develop more or less rapidly, and become often most distressingly marked, should cause much anxiety to the patients and their friends, as well as to their medical attendants.

With regard to the duration of ordinary chronic cases (for acute ones are seldom met with), what has been the experience of those who may read

this article? I have never met with an acute case, but have seen months, and one or two years, pass, before there was more that a partial improvement.

One case, a very bad one, in which the patient's circumstances were so poor that she worked on during her illness, when she should have had care and rest, recovered completely. But so serious was this case that the sight of both eyes was entirely lost from the excessive protrusion of the eye-balls during the disease. When I first saw her, which was years after her recovery, the story of her case was intensely interesting, but most sad.

Then as to the frequency with which relapses occur in this disease, it would be interesting to get the experience of the profession. Many speak of relapses being frequent, even after apparently complete recovery has taken place. Others think them not of so common occurrence.

There are also many points of great interest in connection with the prognosis. One of these is, the probability of the recovery being perfect. My own experience has been that the lighter or milder the case, the greater the probability of a perfect cure.

Another matter of interest is in connection with cases in which the symptoms greatly abate, the health indeed appearing to be perfectly restored, but in which the exophthalmos and thyroid enlargement continue noticeable; whether in such patients very slight causes may not lead to a return of the disease. From what I have seen, the conclusion appears correct, that provided the heart's action is normal as to frequency, and not too easily disturbed, these patients are not specially likely to have a second attack; which is tantamount to saying that provided the heart's action has become normal any other relic of the illness is comparatively unimportant.

I have observed, too, more or less scleroderma present when the attack has not been by any means of a serious character, and when afterwards the general health became all but perfectly restored. This is an interesting concomitant. It would be desirable to have others give their experience as to its occurrence in cases they may have attended.

Then as to the effects of pregnancy during the course of the disease, some high authorities speak very strongly as to its great danger; others remark that the affection has improved during gestation. This is another matter on which fuller information would be most useful.

As to the percentage of fatal cases, this is as yet hardly determined so as to be useful to the practitioner. My own cases have led me to the conclusion that every particular case has to be regarded per se; *i.e.*, if the symptoms are light and comparatively trifling, and show signs of abating, the prognosis is favorable, while under an opposite state of things it is the reverse.

As to treatment, what has succeeded best in my hands has been enjoining upon patients the necessity of a great deal of physical rest, at least ten or twelve hours a day if possible, and the avoidance of all mental worry. On this, great stress should be laid. These patients require abundant nourishment. Galvanism I have found most useful. Employed twice a day, and so applying the poles that the current may go from

the back of the neck through the thyroid gland and the heart, and even (the current being made very weak) through the eye-balls, this current has been continued for months, and in some cases for a year and a half, with good effects. Sometimes tincture of digitalis has been useful in moderate doses, 10 or 12 minims 3 times in 24 hours, in some cases, and useless in others. Iron has been found of great value and persisted in for a long time. As a nerve tonic, strychnine in small doses has been exceedingly beneficial. Quinine if given should, unless malaria complicates the case, be used in small doses only, such as 1½ grs. 3 times a day, with the iron and strychnine.

I know that many of the matters mooted in this paper have been quite recently discussed by Drs. Ord and McKenzie, of London, in an excellent article on exophthalmic goitre in the fourth volume of the new *System of Medicine*, edited by Allbutt, but a still wider discussion on the matters alluded to, and on many others, by practitioners who have met with and treated such cases, will do much good and tend to make the care of such cases more pleasant, and the results of treatment more satisfactory.

---

## CLEANSING AND CLEANLINESS IN ABDOMINAL SURGEONS' OPERATIONS.

BY LAWSON TAIT, M.D.,

Neo. Ebor. Honoris Causa, M.D., St. Louis; LL.D., Albany, etc.

A few days ago I read the detailed description of an operation for the removal of a bullet lodged in the brain, the operation being done by one of our best-known European surgeons and a pronounced follower of the school of Lister. He first removed the dressing and exposed the scalp, which looked like a huge billiard ball, excepting for one ominous black spot where the bullet had bored its unkindly way. Then he took a scalpel which was dripping with antiseptic, a precaution which had not been taken with the foregoing bullet, and deftly incised the scalp. Almost all the time an assistant allowed a fine stream of warm water—sterilized by being boiled and allowed to cool to a safe temperature—to play from an irrigator upon the field of the operation. Then instrument after instrument was used, all evidently the subject of fear, for they all dripped with antiseptic, though the track of the wound and the locus of the infected bullet were left to the prey of the germs which had been carried there, and had been working about for forty-eight hours before the operation. The operator had not read Mr. Leedham Greive's interesting papers on how difficult if not impossible it is to sterilize the hands of the operator, for he consistently made no attempt in the direction, and yet he closed the wound with a parcel of cotton wool feebly impregnated with corrosive sublimate. He then addressed his surroundings on the marvellous results obtained in modern times by antiseptic surgery. In the museum of the Royal College of Surgeons is a large iron bar, technically known as a jumper, which went, under the influence of a charge of gunpowder,

from below the chin of the user and straight upward through the head and out at the vertex, carrying into the wound a lot of germs and leaving them there. No sterilized water was used about the superficial wound, and no corrosive sublimate was then employed, about the end of last century; yet the patient got well and remained so for years. The museums of this country and of others literally swarm with ancient specimens, which prove the receipt of serious cerebral injury with complete and permanent recovery, so that the belief, now seemingly established in the minds of surgeons for the present moment, that a stream of sterilized water and a few grains of corrosive sublimate in the superficial dressings give any greater security for recovery, has no foundation in fact, and is a mere temporal mental aberration.

Some few months ago I read a paper by the same surgeon as I have already quoted, on the subject of the influence of germs; and, in the short space of a column and a half of an ordinary medical journal, he used in thirteen instances such phrases as: "It is now fully established," "It is beyond dispute," "It must be universally acknowledged," "Smith has proved," "Jones' remarkable observations have established," and "A complete result of Robinson's original researches we must believe"; though in not a single instance would I, for one, admit anything of any one of the single assertions. It happens that those indicated as Smith, Jones and Robinson are three frequent contributors of papers on the application of the ever-advancing, ever-developing, ever-changing and never-ending conclusions of the bacteriologists to the practical work of the surgeon; and such men, always anxious for second-hand novelties, forget in one week what they said the week before. In their writings it is an easy matter to picture in detail the extraordinary phases of the evolution of the practice and principle of Listerism, though it is only fair to say that I use Lister's name here with this qualification, that he, while the originator and still the chief advocate of the doctrines so various and so varying, is not responsible for more than about half the nonsense which has grown round the original antiseptic religion. There have been a large number of surgical "Pauls," who have freely disseminated perplexing epistles to the various surgical churches of the world, and thereby much and very acrimonious differences have arisen.

The antiseptic generation has now sped its cycle from 1866 to 1896, and we have come back to the figure of the clock at which we started. The time exactly embraces my own surgical life. In Glasgow and Edinburgh I saw patients die of the same terrible infliction, no matter what had happened to them. I saw removal of breasts end with a fatality which seemed to rival that of amputation at the middle of the thigh, and yet in my own practice during the cycle, out of many hundreds of cases of removal of breasts—how many I could not venture to guess—I think it pretty certain that the mortality has been a long way under five per cent., and probably not been one per cent. In fact, I can call to mind only two fatal cases. The crowded wards, the deficient ventilation, the one saluc-ing-dish and the one sponge in each ward, the want of ordinary lavatory cleanliness, were the causes of the terrible results. The carbolic oil, the putty and the lac plaster may have had some countervailing influence

under the circumstances of these horrible old pest houses, but in practice outside such influences they were useless. These details, together with others which ended finally in the harmonious logic of the spray, marked the first epoch of the antiseptic cycle, a time during which it was devoutly believed that every germ was potent for evil and every resting spore was a surgical pest. Every germ, every spore, every scrap of harmless dust must, therefore, be submitted to a process of destruction by some potent chemical agent. This chemical agent was constantly changed. As soon as one was contrived, adopted, beloved and trusted, it was found by some new observers to be wanting when weighed in the clinical balance. The chemical manufacturers were nearly wild, and many of them were ruined by the continual changes, and the antiseptic market rate for years was something more variable than that of African gold shares.

When the spray was introduced I was led, by circumstances altogether outside of my own conviction, to range myself once more as a follower of the chemical antiseptic school, though I did not for a moment forget or neglect my old methods. I performed a hundred consecutive ovariotomies with a full and complete adoption of all the antiseptic precautions of the Listerian school of the period, and I published a paper in the Transactions of the Royal Medical and Chirurgical Society, contrasting the details of that series with those of a consecutive hundred in immediate opposition to them (and the contrast was not in favor of the antiseptic practice).

By this time I had become thoroughly persuaded as to the future progress of the antiseptic doctrines and practice, and I expressed my prophecy in what I called an experiment, though it was more of the nature of a satire.

I went through all the ceremonious observances with gradually diluted solutions, until I used nothing but boiled water, and then that was dispensed with. Finally, I used only ordinary tap water, and then I gave up the spray. This is precisely what has happened all round. The poisonous solutions were weakened bit by bit; the spray was abandoned, with an expression of shame that it had ever been introduced; rigorous hunting for germs was slackened, and the antiseptic belief so modified that it was at last accepted that not every germ was hurtful, but only such as might yet be identified.

But, on the other side, we found the cubic space allowed to each patient rapidly increased; new hospitals were built, and, above all, the segregation of surgical patients was enormously advanced by the erection of cottage hospitals all over the country. For my own part, between 1878 and 1880, I secured an accommodation of about forty beds, for the occupants of which had each a separate room; in fact, practically they may be said to have all had separate rooms. The effect was at once apparent, for my mortality went down from about thirty per cent. to less than five; and I had long runs of fifty, sixty, eighty, and once as far as one hundred and forty-six consecutive operations, without a death. Even hysterectomy, the most obstinate of all abdominal operations in yielding satisfactory results, has, within the last ten years, given me runs of thirty, forty, and even forty-five consecutive successes. What are the

explanations of all this? The answer is, that, though I cannot produce anything from which I can "absolutely prove," or "make it apparent beyond doubt," or anything of the cocksure order, yet I can give basic conclusions which will be with difficulty upset; and those who neglect them will have to bear serious responsibility in the criticism of the future.

The first conclusion at which I arrived concerning abdominal operations was, and it remains the strongest now, that the more the patients submitted to them are separated the better. For this purpose, and for the greater part of my practice, I adopted, as I have said, a room for each patient. Sometimes, with a press of work, I was tempted to "pack," as we used to call it—that is, put two patients in one room, after the first six or seven days; but I had so frequently to regret this that I ultimately abandoned it.

I am quite sure that there is much truth in one conclusion I have often advanced, that time has much to do with what will happen in the septic infection of an abdominal section. The fourth night is the critical night with all save hysterectomies, and with them that period is not to be so definitely fixed. If an ovariotomy is all right on the fifth morning the chances of the patient going wrong are small indeed. But if you "pack" them they will have hæmatoceles, stitch abscesses, pulmonary complications, mumps, and all sorts of secondary troubles, in a proportion far greater than if you keep them absolutely one in each room. These complications do not affect the mortality much, but they prolong the convalescence in a fashion of the most annoying kind. This has been still more impressed on me during the last three years, in which I have far more widely adopted the plan of operating in the houses of the patients, and leaving the subsequent treatment of them to their private medical attendants. This is now possible, seeing that I sedulously avoid anything in the shape of gratuitous work, whereas for more than twenty years I did not get payment of any kind for more than one-fourth of my clientèle, and not more than costs out of pocket for one-tenth of them. I am now, therefore, working solely in a class among whom it is possible to have all that is requisite in the way of accommodation in the houses of the patients, and after the operation is over I am seldom required to see the patients again, recoveries are so little interrupted. All this experience points out to me the extreme importance of segregation, and the uniform results of the work at the Sparkhill Hospital, not in the hands of one man but in the hands of all to whom it has been intrusted, prove this, as far as proof in surgery can go; for there segregation is carried out almost as completely as it can be carried out in the best houses, while the perfection of the sanitary arrangements provided by the committee of management is almost absurd in its completeness of detail.

All this, and the necessity for it, were enforced on my mind coincident with the complete banishment of any fears of germs, either wholesale or individual, though there still remained with me the wholesome dread of certain specific poisons, the nature of which I do not know—and I think I may safely say that their nature is equally unknown to everybody else. First of all of these, as deadly beyond all things known to me, is the poison begot in the peritoneum and the uterus of the puerperal woman, and in some subjects who have died after abdominal sections.

This brings me to speak of the third phase of the slowly developing Listerism or antiseptic doctrines of surgery, when it had begun to call itself "aseptic," and to adopt some of the minor doctrines and practices which I have been preaching and practising since 1881. All that I have been saying up to now leads me to that condition which, after segregation, constitutes my second general condition essential for success in abdominal surgery, and going a long way to explain our modern success—I mean cleanliness.

Cleanliness in surgery may be divided into general and specific. General cleanliness, such as close attention to cleaning wards and all in them, the cleaning of all linen, bedclothing, etc., and the personal cleanliness of the surgeon and the members of his staff, are matters I need not waste time over. The details of specific cleanliness are matters much more in need of discussion.

For a long time, in the earlier part of my practice, I allowed all properly introduced and qualified practitioners to visit it, and they came in great numbers, chiefly from America. But I soon had to stop this kind of hospitality, and to limit admission to such as came as serious-minded students, prepared to see and understand what they saw. The reason for this was simple. The "globe-trotter" came and saw one or two operations, and departed without understanding anything he had seen; and, if he published, he perversely misrepresented the facts. To this misrepresentation are due two misstatements, which even now appear at intervals in the medical journals of the continent and America. The first is, that I really am a devoted disciple of the chemical-germ-destroyer school, but that I have some substance in use which I will not disclose. The second is, that my secret is "water sterilized by boiling"; and this ridiculous blunder recurred only a few months ago at one of the great congresses of America, and, strange to say, from the mouth of one of my old pupils, Dr. Ricketts, of Cincinnati, who spent six months with me.

It is now fourteen years since I have used sterilized water for any purpose save to raise common tap water to the temperature required, so that the mixture would be probably five parts common tap or well water and one part water which had been boiled and possibly sterilized. The mixture would have a temperature of about 102° F., for my hands will not stand much more with comfort. I have yet to learn that such a mixture deserves the term of "sterilized."

My attention to specific cleanliness is as close as can be given. It may be divided between the instruments and hands of the operator and the abdomen of the patient.

Lawson Tait on English Trained Nurses: "I hail with great satisfaction all the wonderful inventions and devices of the modern operating-theatre for securing general cleanliness, for that cleanliness can be secured only by the work of women, and women in themselves have not the slightest idea of cleanliness save on the surface and unless they belong to the really well-educated classes. This is a fact which no one knows so well as he who has gone through the filthy drudgery of a gynecological out-patient department, where fifteen out of sixteen of the patients have lice or fleas upon them, and often both. This is the material fr m

which the great bulk of the so-called trained nurses are obtained, and with their training, unless most especially well looked after, they alter their habits only in the sense of the smart cap and an attractive uniform. They remain as dirty as ever, and it is therefore necessary to give them shelves and boxes of plate-glass."

[Trained nurses, as we know them in Canada, are, in the great majority of instances, ladies in every sense of the word. Statements such as the above would, as regards them, be libellous. If even approximately true, as regards English nurses, then the protests of the profession generally, and of the Ontario Medical Association, which killed the scheme for the Victorian Order of Nurses, as originally formulated, were timely and most useful. The new scheme does not provide for the wholesale importation of dirty midwives to raise our pueperal mortality to one in sixty, as it is, through their baneful influences in England.—N.A.P.]

All instruments with sliding tubes, screw, or Clendon joints ought to be abandoned; every joint should be capable of being unshipped, and after every operation every instrument used should be scrubbed with raw turpentine and a brush, and then well washed with soap and water. If this is done, simple immersion in cold tap water at the next operation is all that is wanted. Sponges—ah! they want a paper to themselves. They are, and ought to be, the terror of the operating surgeons, and I cannot stay now to say what I have to say about them, save that new sponges are bad, old sponges dangerous, and that none of them should ever be boiled. The Americans will have it that I boil my sponges; but I never did such a thing but once, and that ruined the lot.

Now I come to the real subject matter of my paper—the cleanliness or cleansing of the patients.

I see that a number of superstitious observances on this subject are still recommended, such as the application of an antiseptic pad to the abdominal wall for twenty-four hours before the operation.

I have never employed any such plans, being quite content with a soap-and-water washing of the skin to remove the dead fat and epithelium with which women are always coated, and generally thickly. If there were any real poison in the skin no antiseptic pad would remove it in twenty-four hours. The real poisons known to me as absolute realities, such as those I have spoken of as occurring in puerperal peritonitis, cannot be removed by any known germicide from the hands of the surgeon infected by them. Mr. Leedham Greives' experiments seem to show that it is impossible to cleanse the hands from the ordinary spores of decomposition, and yet we know that nowhere is epithelium reproduced and shed at so rapid a rate as it is on the hand. My knowledge of the terribly infective power of the puerperal poison, from my own experience and that of others, has been so emphatic and the lessons so disastrous that I am persuaded that the poison, whatever it be, permeates at least the whole epithelial layer and cannot be got rid of save by efflux of time and skin, and that it is not safe for any one so infected to operate till at least a fortnight or three weeks have elapsed. Have there not been lessons enough in the same direction by the spread of puerperpal fever from the hands of the accoucheur?

I am not alarmed by the conclusion to which Mr. Leedham Greives'

observations point, for I do not fear the ordinary germ poison at all. But still I take the precaution of keeping my nails short and clean, and washing my hands in raw turpentine the last thing before performing any operation, and then washing off the turpentine by ordinary soap and water. My reasons for this may be seen in the simple experiment of washing the hands three or four times in the ordinary way, and then in perfectly fresh water, repeating the process with the previous employment of turpentine. After this last water has stood for a few minutes there will be seen on its surface evidence of dirt of a very convincing kind. That dirt must be either in the clear turpentine or it must be a layer of dirt removed from the hands by the turpentine after having resisted the previous efforts with soap only. The latter conclusion is that accepted by me, and it accounts for my using turpentine on the patient's skin and my own, as well as on the hands of my assistant, in the rare cases in which I need one.

The final cleansing, and I think by far the most important of the lot, is the cleansing of the abdominal cavity during and after operations.

All the other details of every operation performed by me are conducted, as I have said, by the use of plain cold water, taken immediately from the tap or well, and raised, when necessary, to the desired temperature by the addition of the water from the kettle or boiler; nothing whatever is added to that water for instruments or sponges.

A careful search through the records of abdominal operations, particularly those for the removal of ovarian and other tumors, has not revealed any but the slightest and most casual allusions to any cleansing process till we come to the work of Charles Clay and Baker Brown, who freely mopped out the pelvic cavity with sponges through their large incisions. One of the most interesting recitals, for many reasons, is that of the first ovariotomy of which we have any record; that by Houston, of Glasgow, when he removed the glairy contents and cystic fragments of a ruptured and half-digested tumor with gelatinous contents. He makes no allusion of any kind to a process of cleansing, and yet it is certain that the contents of this ruptured cyst must have spread themselves throughout the peritoneal cavity and have coated every viscus contained within it, as I have seen on many occasions. In my earlier experience I thought such a case was that of all others which required a full peritoneal toilette, and it was to one such in the year 1875 that I owed the initiation of the process of washing as largely a substitute for, and certainly a great addition to, the process of sponging. Now I am quite sure that this is not the case, and for the reason that the gelatinous cyst contents are not dead material, but endowed with just that degree of vitality as to be able to resist the germs of decomposition, unless overdosed with them, just as Lister's blood clot did. In a properly aseptic operation, therefore, as Houston's must have been, the peritoneum will absorb what is left with perfect safety; and here it is that sponging is most especially dangerous and washing particularly safe. The moment a sponge touches such material the surface of its framework is clogged and it will not absorb, while the gluey material is readily soluble in warm water. In the same way coagulated blood is not dead so long as it is safely locked up in living tissue and protected by it from the access of the germs of decomposition,

when it speedily dies, decomposes and becomes a source of danger. Clot adherent in layers becomes slowly organized, and after a period of weeks or months comes to have a system of full nutrition, progressing in this direction till removed or so altered as to be recognized with difficulty from original tissue. This is fully proved by the history of clot layers in cases of recurrent hæmorrhage in ruptured ectopic pregnancies, and in the process of cure of aneurism by arrest of the current through the sac. Bearing the fact in mind, therefore, that the displaced substances we have to deal with in cleansing the abdomen have different degrees of vitality, and therefore different degrees of resisting power, it will help us much in deciding not only how much cleansing is required, but as to the particular method in which the process should be carried out. These, at least, are the principles on which I have worked for over twenty years, and there has not yet been heard any utterance of weight against the almost uniformly admitted fact that my methods of cleansing have not only materially assisted the surgeon in his work, but that they have greatly diminished its mortality.

My early publications on this subject were met with claims for priority by others, as by Keith, who did not, however, advance any evidence on the subject, nor did others. But it would not matter if it were the fact, as it very likely is, that some one else or many others had poured out a jug of water into the peritoneal cavity before 1875; but certainly no one made any attempt to systematize the processes of peritoneal cleansing until I did so, or to show how best it could be done and which methods to choose under particular circumstances. All this I reviewed in a paper published in the *British Gynecological Journal* in August, 1887, and therefore I need not repeat it here.

First of all, let me say that if an operation, such as the removal of an ovarian tumor, has been conducted so well and so fortunately that nothing has entered the peritoneal cavity, the wound ought to be closed at once without sponge or anything else entering it. If, on the contrary, a mess has been made inside, it must be cleansed out; and the question is, to decide on the best method, and the weight of argument should always be against the use of sponges—they are so inherently dangerous, yet their use is often essential. Thus, in separating adhesions of the omentum to a tumor, nothing displays the ability and dexterity of a surgeon so much as a rapid folding up of a dry sponge in the damaged apron. Or, if the adhesion of the appendages to the pelvic wall bleed freely, the pelvis must be packed, and the packing will probably remove much dirt with it. Until two years ago, I always used sponges for this purpose, and would often have six or eight sponges squeezed tight down in the pelvis. Now, I iodoform gauze for this purpose. Who it was who led us into this important advance I do not know; but it is one of real value, for iodoform gauze stops oozing from parietal and visceral surfaces in a way that nothing else will do, save perchloride of iron. If, however, a ligature has cut through a rotten parietal, or a vessel has escaped the forceps and ligature and cannot be found, these washings out with a stream of clean water will speedily display the source of the bleeding and enable the vessel to be secured. I do not combine the two processes if I can help it, for they do not generally aid one another.

As I take it that pus is a substance already dead and generally decomposing—as Miller very characteristically defined it from his common-sense surgical pathology, "effete matter, a foreign body"—I take the utmost care to cleanse it all away, or anything which from my view more or less imitates it, such as loose blood clot and blood in solution. The method to be employed in this case is the continuous stream. The handiest method to serve this purpose is simply to reverse a stream of common tepid water through one of my ovariotomy trocars, and I use a large or small one according to whether I wish to dislodge and wash out loose clots by means of a large volume of water issuing from a large tube; or, on the other hand, if I want to wash carefully every inch of the peritoneal surface, I use a small tube with a gently flowing stream. If the tubes are not handy—and in our worst emergencies, like ruptural pregnancy, they may not be—a very efficient substitute is to open the wound as widely as possible, pull up the parietals, and to pour in with cautious violence one or more jugfuls of tepid water, insert the right hand into the abdomen, and with the left close the wound round the wrist as closely as possible. The process of washing may then be carried out as fully as is considered desirable.

If a tube of any kind can be obtained, it is better to use it, for it can be carried into every one of the complex interstices of the peritoneum, and the washing be thereby made most thoroughly. But let me caution the inexperienced operator against using a double tube for entrance and exit, as has recently been recommended in *The Lancet*. This is no new proposal, and when such is used the stream does not get spread, but returns at once, short circuited, as the electricians say, and without doing much cleansing. Care must be used to have the temperature of the water streams not lower than 100° F., and not higher than 103° F.; and it must be borne in mind that few women, and none whatever of the nurse type, have any sense of temperature in their hands. To them, "blood heat" may be anything between 75° and 120° F.

The further or secondary cleansing of the peritoneum is secured by the use of the drainage tube, to be considered at length in another chapter. So far as I have gone I have laid down the lines on which have been developed the wholesome and aseptic surgery of the peritoneum, a system which I have been advocating for over twenty years, for which persistence my reward is now coming, in seeing that it is being accepted all over the world, and my former opponents of the antiseptic school are finding shelter under its roof from their former extravagances.

---

THROAT POWDER.—

℞ Morphine sulphate or muriate, 1 grain.
Powdered alum exsicc., 60 grains.
Tannic acid, 30 grains.
Cinchona alkaloid, 120 grains.
Powdered gum arabic, 180 grains.
Sugar of milk, 130 grains.

The foregoing is excellent for dry insufflation in troubles of throat, nose, and larynx.—STOCKWELL.

# OBSTETRICS AND GYNAECOLOGY.

IN CHARGE OF

G. P. SYLVESTER, M.D.,
Corner Isabella and Church Streets.

C. A. TEMPLE, M.D., C.M., F.T.C.M.,
Assistant at St. Michael's Hospital. 200 Spadina Avenue.

## THE NECESSITY FOR EARLY RECOGNITION AND TREATMENT OF CARCINOMA UTERI.

BY WILLIAM D. HAGGARD, M.D.,

Professor of Gynecology and Diseases of Children, Medical Department University of Tennessee, Nashville, Tenn.

Manifestly this short thesis is not in the nature of a *résumé* of the vast subject of carcinoma uteri, nor a compilation of statistics from medical records, but it is intended to accentuate the necessity and methods for diagnosis of cancer of the uterus in its incipiency and to quicken the active and growing sentiment in favor of early surgical intervention.

It seems as if Nature allows the disease to linger in its incipient stage, even causing the process of ulceration and the peculiar fetid odor to appear as an admonition of danger. This symptom is so characteristic and unvarying in its nature as to be pathognomic of the disease, and should be sufficiently significant to the experienced practitioner to enable him to make an inferential diagnosis of cancer without a vaginal examination. In impressing this point on my classes I have often stated it in the nature of a question. The cervix, which is primarily involved in probably ninety-eight per cent. of cases, is the most accessible part of the uterus, and the alert physician frequently has time, even after this symptom, for diagnostic purposes, as well as the institution of radical measures for its removal, before the surrounding structures become irretrievably involved.

Unfortunately cancer usually appears in the climacteric decade, between 40 and 50, when the welcome and innocent change of life too often becomes the Nepenthe which leads the unsuspecting woman to "Lethe's dark stream," from which struggling Nature, unaided, never escapes.

Women should be taught to understand that the menopause, while it brings the pleasant assurance of a cessation to the trials of maternity and a conclusion to the annoyance and inconveniences of menstrual life, brings likewise many dangers.

The difficulty lies in getting a starting point. The woman who does not know of the danger of malignant disease at this time does not suspect it, and does not consult her family physician until the disease has made such inroads as to preclude operative aid and her fate is sealed. If we can devise some means by which every woman, when she is approaching

the change of life, could be induced to consult her doctor, we would get a starting point. Then let us appeal to every medical man to teach every woman under his care what may happen to her during this important epoch. If it were possible to have every woman under competent medical supervision during the climacteric, the prophylactic value of this expedient would be second only to vaccination and quarantine.

This desideratum being obviously impracticable, it remains for all of us individually to instruct our own clientèle. Every woman should be plainly taught the phenomena of a normal menopause. If there is any abnormality, such as too frequent or too profuse menstruation, or the appearance of a watery discharge, particularly if it be attended with admixture of shreds of tissue resembling the washings from raw beef, and often quickly followed by a fetid discharge of disintegrating tissue, she should consult her attendant at once. The occurrence of frequent, or even occasional, sharp, quick, uterine pains should be regarded with suspicion. Another matter of importance is attention to metrostaxis months or years after the cessation of menstruation. Any of these symptoms in connection with the change of life should suggest a thorough examination. They indicate the possibility of malignancy and require immediate inspection.

Apart from the difficulties of seeing these cases early is the accurate diagnosis when they present themselves. I will not enumerate the symptoms, which, with the exception of fetor, are not conclusive, but serve merely as danger signals and as a mute admonition for investigation. Let us, then, consider the well-known methods of diagnosis which should be employed here.

As an additional reason for making no mistakes in the detection of cancer, it is, as a rule, simple and oftentimes infallible. I have repeatedly said in the lecture hall that cancer, of all uterine diseases, was most unmistakable. With a correct knowledge of its manifestations, the simple employment of the senses of touch, sight, and smell is, as a rule, all-sufficient. Beginning usually with a digital examination, the indurated cervix imparts a cartilaginous sense of resistance in the early stages, or may present the characteristic papillary or "cauliflower excrescence" feel, or the ragged, ulcerated area of varying extent. Instrumental inspection reveals the livid, exfoliating surface, similar to the eversion attending aggravated cases of lacerated cervix. The ulceration has a peculiar yellowish hue, and the vegetations attending the papillary varieties are characteristic. The discharge complained of can then be easily investigated at this time and an estimate made of its quantity and character. If necrotic destruction has commenced, the peculiar fetid odor, once observed, is so distinctive and characteristic as never to be forgotten and to serve as alone sufficient to establish a diagnosis. From this recital of the usual findings in malignant disease it is apparent that one practically does not need a microscope. However, if the disease begins in the cavity it should always be brought into requisition. I am aware that in many cases scrapings simply bring away detritus that is structureless and useless microscopically, but it has often been proven that curettings from a suspicious case dropped into alcohol and submitted to a competent

microscopist have converted a supposedly benign case of endometritis with metrorrhagia and enlargement of the uterus into sarcoma or the malignant form of adenoma. I have even known charitable microscopists to find evidences of malignancy in uteri removed for other reasons.

When diagnosis is indisputable the very responsible question of operability requires answer. I will formulate the rule that has no exceptions: No case should be subjected to operation in which all involved structures cannot be removed. Rules are intended to simplify, but their rigid fulfilment does not simplify generally. This is especially true in this connection. I do not know any problem in surgery whose solution is fraught with so much difficulty as the determination for or against operation in cancer of the uterus; aside from the very great moral responsibility in the technical discrimination is the selection of cases. There are a few general but well-defined principles that may be relied upon. The cervix, where the majority of these maladies originate, is more sparsely supplied with blood-vessels and lymph channels than the endometrium or the corpus uteri, and it is a matter of general observation that carcinoma may exist there for a considerable time without making inroads by involvement of adjacent tissue to such an extent as to militate against the feasibility of complete removal. How long? Would that I could say! The natural history of uterine cancer has been estimated as lasting from one to one and a half years; for exceptional cases, possibly longer.

It is apparent that only in the early months is extirpation safe. The danger of delay after the appearance of the disease increases in alarming ratio to each month of its existence. Reed* reports the most significant comparative table that I have yet seen. In seven cases in which the disease was of more than six months' duration before operation, none were alive two years after operation. In seven cases where the disease was of six months' or less duration before the operation, six were alive two years afterwards. While this is only approximately accurate, it is strikingly conclusive. The extent of the ulceration is another important matter, but must be taken together with the amount of involvement of perinterine tissue. This requires the most careful palpation, directed to the discovery of any glands at the base of the broad ligament or any induration therein. I am in the habit of supplementing bimanual examination with the middle finger in the rectum for a more thorough exploration. There are many shades of involvement and a corresponding latitude in the limits for and against surgical resort. The most important one, and the one which may even be too liberal, but beyond whose limit surgery should never transcend, is immobility of the uterus. It signifies a forbidding amount of secondary deposit in broad ligaments, or a still more formidable complication—peritoneal adhesions. It has given me more disappointment than any other one complication, and has caused death from shock, abandonment of operation, and recurrence.

If physicians would only realize that the difference between early discovery of this desperately fatal disease, with its brilliant possibility of cure, and delayed recognition with contiguous implication that denies the

* Transactions of the American Association of Obstetricians and Gynecologists, vol. v., p. 307.

only hope, is literally a difference between life and death! I cannot say definitely, but I think I have seen a dozen cases that were so far gone as to be hopeless, to one that was within the possibility of surgical relief. I believe mine is not an unusual experience. This ought not so to be. I am aware that some practitioners hesitate to operate or to even have consultation in merely suspected cases of malignancy, for fear of causing a sensation and bringing criticism on themselves. This is a great error. Better to suspect a dozen cases that are not than to err in one case that is malignant. The deplorably large number of cases in which the disease is so far advanced as to preclude all hope of relief by surgical means is astounding, and should be a rebuke to the profession, who should be the guardian angels of their people, and by whose instruction and advice woman should be shielded against this terrible disease and the still more terrible death which awaits her. There never has been a time in the history of medicine when the constantly increasing and unnumbered class who, from whatever unknown cause, are victims of the dread scourge of malignancy, could look forward to temporary, if not permanent, relief with such confidence.

It was my contention years ago, when the surgery of the complete removal of the uterus was clouded with dark records, that it was the only logical treatment for malignant disease, and I predicted the day to be not far distant when the wonderful advancement in surgery would place it in the pale of legitimacy. I am thankful that I have been permitted to live to see a consummation of that belief; and as I decried partial amputation as a mere resection of the disease, when it was in vogue, it is unnecessary for me to recite the arguments against its validity now. I can only explain the excellent reported results from that measure on the ground of the possibility of errors in diagnosis, and, believing carcinoma to be a strictly local disease, to account for the large percentage of cases in the presence of actual disease on the theory of early removal while completely localized and before the occurrence of extension. Far from commending it in these cases of apparent localization, I can only regard the good results following it as extremely fortunate, because I have seen metastatic deposits in the uterine body after hysterectomy that could not have been positively excluded or anticipated.

So that the apparently paradoxical rule of Pozzi, "the more limited the disease the more extensive should be the operation," is seen to be founded on undisputed pathological data and unquestioned surgical demonstration.

Pozzi says: "In thus removing the whole of the uterus the result is certain; there is no opportunity for the disease to recur locally, and we avoid all ganglionic engorgement and invasion of the adjacent tissues, both of which have occurred where the treatment has been palliative and only partial destruction attempted. In other words, we simply apply here the rules which are accepted for external or general cancer."

The contraindications, involvement of contiguous tissues, immobility of the uterus, and particularly extension to adjacent organs, having been ruled out, I believe the most generally applicable surgical procedure is total extirpation by the vagina. Next to the perfection and populariza-

tion of abdominal section, the improved technique of pelvic surgery through the vagina is the most signal advance in the domain of gynecology. Carcinoma was the classical indication for vaginal hysterectomy, and to its ever-present and increasing necessity for alleviation must be ascribed the achievements of this route as applied to other pelvic conditions. The immediate mortality is between two and four per cent. in the hands of the expert. The operation, as performed with forcipressure in lieu of ligatures, is more rapid and attended with less shock, and, in my opinion, is the procedure of election. I have long believed that the sloughing resulting from the forceps operation is conducive to the further destruction of undetected nodules, and thereby a protection against recurrence.

There has even been some effort made to use the toxins of the pus-producing bacilli in inoperable carcinoma. Coley has had a gratifying meed of success with the toxins of erysipelas and bacillus prodigiosus in mixed culture. It seems to have given better results in sarcoma than in carcinoma, but I do not know that it has been applied to the uterus at all. I believe in the future successful application of some form of serum therapy to malignant disease. It will be the crowning triumph that science will bestow on humanity.

It is a well known clinical fact that in carcinoma of the breast there are distinct cancerous groupings of cells in the axilliary glands, so minute as not to be felt. This has led to routine clearing of the axilla of all its glandular contents instead of simple excision of glands appreciably enlarged. The results of amputation of the mamma with this very important addition to the technique have been perceptibly bettered. This principle has been extended to operations for carcinoma of the uterus. Clark, by ligation of the uterine artery beyond the vaginal branch, thus obtaining a bloodless field of operation, has cleared the pelvis of the connective and glandular tissue in the broad ligaments after removal of the uterus. This operation, so correct in its principle, has yet to demonstrate a decided improvement as to remote results before the objection of its greater danger can be overcome.

If the profession at large would only heed the lesson sought to be inculcated herein—viz., (1) education of female patients to the danger of cancer at or about the menopause; (2) early interpretation of suspicious symptoms, followed by immediate local examination; (3) prompt surgical interference in malignant disease—it would be the means of adding uncounted years to the span of life in women thus afflicted. In conclusion, permit me to emphasize one single statement: Medical treatment of uterine cancer is neglect; early surgical procedure, prompt and efficient, is the only rational treatment.

While we are awaiting with anxious expectancy the advent of the magical orrhotherapy that will liberate mankind from the thraldom of malignancy, let us not relax our efforts to detect its insidious approach and thwart its deadly advances by the timely and skilful institution of radical and immunizing surgery.

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF
CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

## THE DIAGNOSIS AND TREATMENT OF MULTIPLE NEURITIS.

BY CHAS. LEWIS ALLEN, M.D.,
Lecturer on Nervous Diseases, Georgetown University, Washington, D.C.

*(Continued from last month.)*

Locomotor ataxia is slow in course; there is for a long time little or no loss of power in the muscles, but inability to co-ordinate their action. This "ataxia" never comes on until months after the onset of the disease. There is no muscular tenderness or pain, but special tendency to involvement of sphincters and eye muscles, and to optic-nerve atrophy. Romberg's symptom and failure of the pupil to contract for light, while it contracts for accommodation (the "Argyll-Robertson pupil"), are almost invariably present, and "girdle sensation" is very common. In the more acute motor form of neuritis, the distinction is seldom difficult. It is the sensory atactic form, the peripheral neuro-tabes, in which the difficulty occurs, and when the onset of the disease is slow, and there is some involvement of the sphincters and of the eye muscles, with pains in the limbs, the diagnosis may remain long in doubt. The most important diagnostic points of peripheral neuro-tabes are rapid evolution of the ataxia, muscular pain and tenderness, and absence of the "Argyll-Robertson pupil." There may be paralysis of the iris in neuritis, but it is always complete, never with dissociation of the reactions for light and for accommodaaion, Muscular atrophy is more characteristic of neuritis, but may come on in locomotor ataxia. Involvement of the sphincters only rarely occurs in neuritis, but is common in locomotor ataxia.

In a large number of cases of neuritis, the cause removed, the disease goes on to recovery; but, unfortunately, this is not always so. The acute cases, with involvement of the nerves to the heart and respiratory muscles, are very dangerous and apt to result fatally. Unless such involvement occurs, however, the immediate danger to life is small. With regard to restoration to function, the prognosis varies, depending upon the removability of the cause and amount of change in the muscles and nerves and in the spinal cord. This latter brings us to a most important point. That in the course of multiple neuritis changes in the spinal cord may occur has long been known. In recent years considerable attention has been paid to the subject; the cords from cases of neuritis and those from animals

whose nerves have been cut experimentally have been examined, and the results of a number of such investigations have been published.

That when a nerve fibre is cut degeneration takes place in the part separated from its ganglion cell was shown long ago by Waller. It has since been found that in the part still connected with its ganglion cell, degeneration also occurs. This has been called "retrograde degeneration," in contradistinction to Wallerian degeneration. It may extend into the spinal cord. The combined results of a number of investigations show that in multiple neuritis secondary changes in the spinal cord may occur. These changes may effect the anterior roots, the posterior roots, the anterior, lateral, or posterior columns, and the cells of the gray matter. The location of these changes varies in different cases, but involvement of the posterior columns and posterior roots is most frequent, though the anterior roots and cells of the gray matter often enough show changes. By no means all the fibres in the affected regions are attacked, but the Marchi method shows the presence of a greater or smaller number of degenerated fibres among the healthy ones.

In cases with involvement of the spinal cord, the prognosis is unfavorable. Three signs of spinal-cord involvement given by Gowers are: impairment of the functions of bladder and rectum, girdle pain, and loss of sensation, or paralysis of all muscles below a certain level, *e.g.*, below the knees.

In all except the mildest cases of neuritis recovery is slow, and is preceded by a stationary period, which lasts one or two months. Some power may be regained after two or three months, but the average duration of the weakness is six or seven months, and it may be a year before all the muscles recover. In all but the mildest cases there is rapid change in electrical reaction. This may be only diminished irritability, or may go on to partial or complete reaction of degeneration. The more the deviation from the normal, the greater the wasting and the longer the duration of the paralysis. Usually power returns before normal reaction, but a recovery of electrical irritability by nerve and muscle, especially to faradism, is a favorable sign. When reaction of degeneration is present and persists, the prognosis is unfavorable, though an exact time limit can hardly be given. In the treatment of neuritis the first and most important indication is to remove the cause.

The alcoholic should be warned that persistence in his habit will prevent a cure, and if resumed is likely to cause another attack. The elimination of lead from the system can be hastened by a course of potassium iodide with an occasional purge of Epsom salts. Malarial infection calls for quinine; rheumatism for salicylates or salicin. The acute cases due to cold may be treated as rheumatic, alkaline bromides being added to the salicylates. The pain may be so severe as to call for morphine, but the newer analgesics, antipyrin, acetanilid, or phenacetin, may be tried, due regard being paid to their tendency to depress the heart. The pains in the limbs may be relieved by warm or cold applications, though the muscles are usually too tender to bear much weight. Absolute rest of the affected part should be secured, the limbs being best supported on soft pillows.

In diphtheritic paralysis of the palate muscles, it may be necessary to feed with a tube. The diet should be nutritious, with plenty of fat, as cream and cod-liver oil, as soon as the process of regeneration is commencing. As tonics, iron, arsenic, phosphorus, and strychnine should be given. The last is specially valuable, but should not be persisted in for more than three weeks at a time. By judicious changes, a therapeutic course can be kept up for a long time. When pain and tenderness are gone, warm and cold douches to the affected limbs, with massage, are useful, and electrical treatment should be begun. The best results are from use of the galvanic current. It should be applied daily for about ten minutes at a time, first stabile, then labile. A strength of ten milliamperes will usually be sufficient. Later the muscles should be exercised, by interrupting the current, with one pole, preferably the negative, on one motor point after another. For this the faradic current may also be used. When anæsthesia is present and persists, this latter current, with the wire-brush electrode rubbed gently over the affected area, is useful. In chronic cases tendency to secondary contractions should be combated by suitable apparatus. When they occur, orthopœdic measures are indicated. I add a sketch of four cases, which illustrate some of the points discussed.

Case I.—A girl of fourteen years, with obstinate chorea, while being treated with large doses of Fowler's solution, suddenly developed weakness in the legs, with foot drop and slight sensory disturbance. The arsenic being stopped she improved, and, received electrical treatment, at the end of a month or six weeks was able to walk about again.

Case II.—An imbecile girl of twenty-one, an inmate of an insane asylum, was taken with a number of other patients into the grounds and kept there during the greater part of one day, while something was being done to the ward. She lay upon the grass all the time, In a day or two she was noticed to have a weakness of the muscles of the arms and legs, and wrist drop and foot drop developed. When seen by the writer about a month or six weeks later, she had foot and wrist drop on both sides; there were weakness and wasting of the muscles of the front of the legs and back of the forearm. She could not walk without support. The electrical reactions in the affected muscles were quantitatively reduced, but no reaction of degeneration could be found. No satisfactory information as to sensory symptoms could be gotten, owing to her mental condition. Under general tonic and electrical treatment she improved, and when last seen, two months later, could walk about the ward. Neuritis from cold (probably).

Case III.—A healthy, athletic young man of nineteen, received on November 29, 1895, a slight wound on the back of the second finger of the left hand, to which he paid no attention. A week later the finger was greatly swollen. Lymphadenitis extended up the arm, and the axillary glands were enlarged. The wound became gangrenous, and the patient presented evidences of a mild septicæmia. His condition improved under treatment, but the wound sloughed and and was a long time healing. He returned to school about the middle of January, but soon noticed that he saw double and could not read. His tongue became affected and his articulation bad. He complained of numbness and ting-

ling in his fingers, and his arms grew weak. There was some weakness of the trunk muscles. Next his legs were attacked, and he became paraplegic. Under treatment he improved somewhat, and was sent out of the city to recruit. He then could walk a little. While away he had a relapse, and by the end of February could not get about at all. When seen on March 1st by the writer, he could not stand or walk without crutches. The eye, face and tongue muscles were normal ; the muscles of the arms acted normally, but were slightly weak. Trunk muscles normal, legs weak and their movements atactic. Slight wasting of leg muscles. Tendon reflexes absent; sensation normal, except on soles of feet. Electrical reactions quantitatively reduced in peroneal group and quadriceps; extensor otherwise normal. Under tonic treatment (mainly strychnine and electricity) the patient improved, and by July was perfectly well. Septicæmic multiple neuritis.

CASE IV.—A man of fifty years, a habitual user of spirits, though never intemperate, had in 1891 an attack which he says was similar to the present one, and from which he recovered entirely, except for slight weakness and a little ataxia of the legs. In February, 1896, he noticed increasing weakness in his legs, but paid little attention to it. In March he consulted a physician, who found some weakness of the muscles of the front of the legs, with tenderness in these muscles and their nerves, and loss of knee jerk. The extensors of the hands were involved, but to a lesser degree. His condition became gradually worse, the affected muscles wasted, the legs became anæsthetic, and paresis of the bladder (affecting the detrusor alone, the sphincter continuing to act) appeared. When examined by the writer, on May 10th, he was bedridden and could not sit up without assistance. The pupils reacted normally ; the eye, facial, and tongue muscles were unaffected ; the arms were weak, but there was no wrist drop. Back muscles weak. There were great wasting and weakness of all the muscles of the legs. The thighs could be flexed on the body and the legs on the thighs, but the latter only when the thigh was supported. There was foot drop—complete on the left, partial on the right. Tendon reflexes were absent. Below the knees, complete anæsthesia ; on the thighs and arms below the elbows, diminished sensibility. The electrical examination was not very satisfactory, but as far as made showed reduced irritability, but no reaction of degeneration. As the legs could not be raised well, inco-ordination could not be made out, but there was some loss of ability to locate the position of the limbs (loss of muscular sense). On October 6th the attending physician reports but little change in his condition, though he had gained some flesh. Alcoholic multiple neuritis, with probable involvement of spinal cord ; prognosis unfavorable.

REFERENCES.

Starr : Multiple Neuritis. Middleton-Goldsmith Lectures for 1887, MEDICAL RECORD, February 5 and 12, 1887.

Gowers : Diseases of the Nervous System.

Déjerin : Nervo-tabes Periphérique. La Semaine Médicale, April 26, 1893.

Sollier : Psychose Polynévritique, Rev. Neurologique, No. 15, 1895.

Oppenheim : Lehrbuch der Nervenkrankheiten.

Onuf : Constitution of the Ganglion Cells, etc. Journal of Nervous and Mental Disease, October, 1895.

Darkschewitsch : Zur Frage von den secundaren Veranderungen der weissen Substanz des Rückenmarks, etc. Neurolog. Centralblatt, No. 1, 1896.

Soukhanoff : Contributions à l'étude des changements du système nerveux central dans la polynevrite. Archives de Neurologie, No. 3, 1896.

1,828 H. Street, N. W.

---

Kollofrath, O.—Removal of a Piece of Bone from the right Bronchus per *Vias Naturales*, with direct Laryngoscopy. *Munch. Med. Woch.*, September 21, 1897.

Description of a case. The patient, while eating a pork hash, swallowed a bone. Pain in throat, dyspnœa, cough, etc., at once came on and continued. When first seen in Prof. Killian's clinic the symptoms had subsided considerably. Examination with the laryngoscopic mirror failed to reveal anything indicative of foreign body. Only a short part of trachea could be seen, owing to lateral curvature in it. The bifurcation could not be brought into view.

Prof. Killian then examined with Kirstein's direct laryngoscope (autoscope), and after much twisting about of patient's head, body, shoulders, etc., finally managed to see the bifurcation. Something bright was seen in right bronchus, which might be bone. The patient bore examination with the autoscope extremely well, and it was then found that he could bear having a tube passed right into the larynx. A Mirulicz-Rosenheim œsophagoscope was passed down through the larynx and into upper part of the trachea, and through this the bone was removed by means of a specially made long tube-forceps. One or two small pieces broke off first, but in the end the large piece came away. It measured 17 by 14 by 8 millimetres.

Arthur J. Hutchison.

---

The story runs that there was a very miserly but rich man, who to save legal fees by consultation at the lawyer's office, used to invite his solicitor to his house to dinner, and while at dinner would ask him many legal questions, all of which, of course, were for his own benefit in the management of his own affairs. This thing went on so repeatedly that the lawyer became suspicious, and, therefore, on his return from each dinner party he would make note of all the questions that were asked, and every time his opinion was given he made the usual charge for the same. At the end of a year he sent in his account, giving day and date for every opinion, and the subject. He immediately received a check for the amount from his client, and by the next mail received an account from him categorically reciting each dinner that was given him, for which he was duly charged, also for all the wines that he drank, and cigars. The lawyer paid the bill without a word, and then laid information before the proper authorities against his client for selling victuals and liquor without a license, according to law. The informer received half the fine, which was considerable, and thus obtained his fees indirectly by informing against his client.—*Med. World.*

# PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF
H. B. ANDERSON, M.D., C.M.,
Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital. 241 Wellesley Street
H. C. PARSONS, M.D., 97 Bloor Street West.

## INTESTINAL AUTOINTOXICATION.*

BY CHARLES D. AARON, M.D, DETROIT, MICHIGAN,

Instructor in Materia Medica in the Detroit College of Medicine.

The term autointoxication has undergone many changes of meaning in the short time since it has been introduced into medicine. It has as yet not been definitely agreed upon. Autointoxication through the intestinal canal consists of the retention of normal and abnormal material in the intestines. The result of the stagnation of such material is the decomposition, putrefaction and fermentation of the ingesta. The products of carbohydrate fermentation give formic, butyric, lactic, acetic and succinic acids, gases, et cetera, while the products of albuminous decomposition give $NH_3$, $CH_4$, $H_2S$, leucin, cystin, phenol, indol, skatol, tyrosin, aceton, et cetera. In a paper of mine on "Diarrhea and Bacteria," published in *The New York Medical Journal* May 8, 1897, I cited several authorities who have shown that vast numbers of microbes within the intestinal canal generate poisonous ptomains and toxins which are rapidly absorbed. With the superabundant production and the retention of all these substances in the intestinal tract, a series of symptoms presents itself, suggesting a diseased condition of the digestive tract, of the respiratory system, of the circulation, of the kidneys and, above all, of the nervous system. There is no positive proof that these symptoms have some definite relation with the poisons retained in the intestinal tract. Still, since a condition of autointoxication clearly exists, inasmuch as the symptoms disappear when the poisons are removed, we may safely assume that the symptoms presented are due to autointoxication.

It is a well known fact that there is a certain relation between affections of the digestive tract and diseases of the nervous system. The ancients went even so far as to charge certain forms of vertigo to disturbances of digestion. The term hypochrondria, originally the name of that part of the body situated between the xiphoid cartilage and the navel, implies that it was supposed that the abdominal cavity was the seat of the pathological condition.

Intestinal autointoxication can become manifest through the nervous system, through a derangement of metabolism, through the circulatory

*Read before the Detroit Medical and Library Association.

system and through the skin. Vertigo, which appears also in other forms of poisoning as through alcohol, nicotine and various alkaloids, is a constant symptom of intestinal autointoxication. We also find headache, pressure in the head, neuralgia and cerebral vomiting. Psychic disturbances are often particularly marked. Depressed spirits, feeling of disgust, aversion to work, disinclination to social intercourse, and melancholia are observed in these patients. All symptoms which are present in neurasthenia are present also in intestinal autointoxication. While we were formerly inclined to look upon the disturbances of digestion in neurasthenia as secondary symptoms, experience teaches that the symptoms of the digestive tract precede neurasthenia. In certain cases there is a disturbance in the organs of sense, darkening of the field of vision, hallucinations, ringing in the ears and deafness.

Bouchard has demonstrated the toxicity of the urine in neurasthenic cases, and it is absolutely certain that poisonous products get into the blood. Indicanuria nearly always suggests autointoxication. Constipation is not necessarily coincident with autointoxication, for it has been shown that the more fluid-like the contents of the intestine are, the more rapid is the absorption of poisonous material. Accordingly, the urine in diarrhetic conditions has been found to be most poisonous. In cholera the absorption of toxins is continuous despite frequent energetic evacuations of the bowels. It appears that patients in states of autointoxication feel better when constipated than when their intestines are filled with semi-solid materials. Again, we have an autointoxication in an obstruction of the bowels, for the natural outflow of the waste material is arrested, excretion is imperfect and absorption of the poisonous materials which are present takes place quite rapidly, The eclampsia of children with digestive disturbances is more easily explained in terms of autointoxication than on lines of the reflex theory.

Boix, of France, has published a book entitled "Cirrhosis of the Liver Produced by Autointoxication of Intestinal Origin." He proves that in addition to alcohol as a cause for hepatic cirrhosis, there is an autointoxication of gastrointestinal origin which frequently causes cirrhosis. The author demonstrates that there is a peculiar form of hypertrophic cirrhosis which is caused by the passage through the liver of toxic disturbances produced in the alimentary canal, and he calls this a dyspeptic liver, so as to differentiate it from alcoholic liver, which designates also another form of cirrhosis.

To the class of cases in which we have a derangement of metabolism due to autointoxication we may add many cases of chlorosis. In certain cases of chlorosis we resort to antifermentive therapy, and this implies that we believe that there is some pathologic connection between it and autointoxication. While I do not wish to maintain that every case of chlorosis is traceable to autointoxication, I must mention the fact that Bouchard, Rosenbach, Conturier and others have shown that intestinal autointoxication has considerable significance in chlorosis.

Such disturbances of the circulation as excitability of the heart, tachycardia and various other forms of vasamotor disturbances are often due to intestinal autointoxication.

Autointoxication frequently becomes visible in certain kinds of skin affections, such as urticaria, which is produced in many cases by the eating of lobsters, cheese, et cetera. It was formerly regarded as idiosyncracy, but we know that it is an intestinal autointoxication. Pick, of Vienna, has proven that attacks of urticaria can be prevented in susceptible patients by cleansing the intestinal tract. Singer has verified this and adds that there is always an increase of indican in the urine.

Asthma dyspeptica, which consists chiefly of dyspnea, can be attributed to autointoxication, but this has not as yet been proven. The symptoms of collapse produced by obstruction of the bowels, either acute or chronic, are no doubt due to autointoxication. The kidneys being compelled to eliminate the poisons which have been absorbed through the intestinal tract are in this way injured. Albuminuria found in an intestinal stenosis and the disappearance of the albuminuria, when the obstruction is removed, are probably due to autointoxication.

Posner has even gone so far as to maintain that nephritis may be superinduced by bacteria which, having been absorbed by the intestines, have found their way to the kidneys and there cause an inflammatory condition. The bacillus coli communis especially is apt to behave in this way.

From all that I have cited it seems to me clear that autointoxication through the intestinal tract is a frequent phenomenon, leaving it to future investigators to add to the meagre information we have at present.

32 Adams Avenue, West. —*The Physician and Surgeon.*

---

## THE SERUM DIAGNOSIS OF TYPHOID.

WIDAL AND SICARD (*Ann de l'Instit. Pasteur*, 1897, No. 5) in a lengthy article review the progress of our knowledge on this subject, and give their own conclusions based upon the study of 163 cases. From only one of these was the reaction absent throughout; this was a patient aged 40, who was admitted on about the twelfth day of the disease, and whose temperature remained high for twelve days subsequently. Eleven days later a relapse came on, and lasted fourteen days; during both attack and relapse puncture of the spleen yielded pure cultures of the typhoid bacillus, which were readily agglutinated by the serums of other typhoid patients. The serum from this case, however, never gave the agglutinating reaction. This disproves Gruber's assertion that the reaction is one of immunity, since the patient recovered from both attacks without its manifestation. The reaction has been found as early as the second day (by the authors not before the fifth) and as late as twenty-six years after convalescence; the date of its appearance bears no relation to the severity of the attack. The authors find that on dialysing serum or milk the agglutinating property does not appear in the dialysate till the proteid matters begin to come through; these, however, may commence to appear before the property develops, and as the agglutinating substance can be detected in non-albuminous urine its true nature is still uncertain. A large part of the article is devoted to the study of the measurement of the

agglutinating power of typhoid serums. The maximum observed was 1 in 11,000, that is, the serum diluted to this extent still gave the reaction; this occurred on the eighth day in a young man aged 22, the subject of an attack of medium severity, convalescence from which was rapid and complete. This patient had been unwell for about twelve days before he came under observation, so that the maximum was probably reached on somewhere near the twentieth day of the disease. The curve of agglutinative power varied greatly and unaccountably in many cases. Thus in 2 which ended fatally the power of agglutination was observed to fall greatly during the few days before death, in two others it fell less, while in a fifth it was the same on the day of death as on that of entry into the hospital. In patients who recovered the variations were no less remarkable. A sudden and considerable rise either at the beginning of defervescence or in the last days of the disease was by no means uncommon, while in one instance the agglutinating power sank towards the middle of the disease, rose again during its decline, sank anew at the beginning of defervescence, and finally rose in the second week of defervescence. Even daily variations were frequently met with, and the differences in similiar cases could only be explained as idiosyncratic. With regard to the extent to which the serum should be diluted for diagnostic purposes the authors recommend an invariable first trial with a dilution of 1 in 10 followed by as many successively higher dilutions as possible, till the limit of action is reached. If but a small quantity of serum is available the test should always be tried with dilutions of 1 in 10 and 1 in 50; if the agglutinative property is not found with the latter strength many bacteriologists hesitate to declare it to be certainly typhoid. The authors' general conclusions may be thus summarised; The agglutinating reaction is one belonging to the period of infection. It can usually be detected in typhoid patients during the first days of the disease, and though sometimes delayed is but exceptionally absent. It is not a vital reaction on the part of the agglomerated microbes, and is subject to important individual variations. From the practical point of view the authors state that a negative reaction obtained with the serum of a suspected patient furnishes a probability against the diagnosis of typhoid, but this is only a probability, especially if the examination is made during the first days of the disease. In such cases the examination should be repeated on successive days. The probability is the greater the later the examination is made during the disease. A positive reaction obtained according to the rules of measurement laid down by them (the serum being diluted never less than ten minutes) can be considered a pathognomonic sign of typhoid fever.—*British Medical Journal.*

---

## RENAL HÆMATURIA WITHOUT APPARENT CAUSE.

DIEULAFOY has collected (*Journ. de Méd.*, July 10th, 1897) some instances of hæmaturia of which the explanation is extremely obscure. In some cases there is abundant and repeated hæmaturia without evidence of tubercle, renal calculus, or any ordinary cause. The following case,

originally described by Brocha, is quoted. A woman, aged 28, without history of hæmophilia or tubercle, was attacked by pain in the right lumbar and hypochondriac regions, and by hæmaturia lasting about six months without intermission, the blood being always intimately mixed with the urine, and, instead of diminishing in quantity, had actually increased. There was persistent renal pain without at the same time the characters of renal colic, nor was there oliguria nor gravel, there not even being any deposit of uric acid. In the face of these symptoms it was at first supposed to be a case of tubercle or cancer. On physical examination, the right kidney was tender but unaltered in size. Hæmaturia was unaltered by exercise of any kind. In appearance the patient looked well and there was no loss of weight; no tubercle bacilli could be found. It was decided to operate, but examination of the kidney failed to show any lesion, and the operation was not continued further. From this time forward the hæmaturia ceased completely, and at the present time there has been no recurrence, and the pain has disappeared. Dieulafoy gives a case of his own, somewhat similar in nature. A boy, aged 15, was subject to hæmaturia for two years, coming on without any apparent cause on making the least exertion, or even taking a short walk. A printer by trade, he was unable to work two hours in the erect posture without an attack of hæmaturia; it even happened at times that blood appeared when at rest. On examination the patient seemed extremely weak and anæmic, but no physical signs could be obtained or subjective symptom of any particular lesion. He was put on treatment by turpentine in gradually increased doses, and from 6 to 12 capsules daily. The urine gradually lost the sanguineous appearance, and finally the hæmaturia disappeared completely. After two and a half months the cure seemed complete. and now, after five years, there has been no recurrence. The patient can take long walks, work overtime, and take any exercise he likes without the least inconvenience. His general health is excellent, and he continues to take a small amount of turpentine daily. Whatever be the nature of the cases, whether hæmophilic or congestive in character, the fact remains that they are of great importance, and extremely obscure of diagnosis.

---

## HÆMORRHAGE AT MENOPAUSE AND CANCER.

Pichevin (*Bulletins et Mém. de la Société Obstét. et Gynéc. de Paris*) relates the history of a married but childless woman, aged 50, who had been subject for several years to a small fibroma of the body of the uterus without menorrhagia or disease of the appendages. The periods remained quite regular till November, 1896, then no show was seen till a little appeared last January. Five weeks later a very little blood was seen at the vulva. On March 20th severe hæmorrhage set in, and could not be checked by hot injections, ergot, or any other remedy. Much blood escaped, almost without ceasing, till June 13th. There was never any fœtor. Slight lumbar pain was present throughout. The cervix was quite healthy; the fornices free. The uterine cavity measured just 3½ inches

and the body was as big as a fist. On exploration a fungous mass was found springing from the endometrium posteriorly and to the left ovarian area of about 2½ square inches. It was removed, and found to be the produce of glandular endometritis. There had been no bleeding till this year, when the patient was 50, though the fibroid enlargement was clearly not recent. The microscope proved that the growth was not malignant, nor due to true fungous endometritis, such as Trousoeau detected in old women as long ago as 1856. The patient is now free from hæmorrhage. It need hardly be said that the course here pursued was necessary for diagnostic reasons. Doléris, discussing Pichevin's case, said that diagnosis from simple inquiry about the "show" was seldom difficult. Menorrhagia of the menopause appears as a sudden and very free discharge of blood following distinct cessation of the catamenia for two or three months. The discharge occasionally recurred. The bleeding of cancer was insidious, irregular in character, and very frequently appeared in the interval of the period during the last year or two of menstruation. —*Brit. Med. Journal.*

## ETIOLOGY OF MALIGNANT TUMORS.

Roncali (*Journal of Pathology and Bacteriology*, Vol. V., Jan., 1898), contributes an article on the etiology of malignant tumors, in which he strongly upholds their parasitic origin. He differs from the earlier authors, however, who described the peculiar cellular inclusions found in malignant neoplasms as protozoa, or low forms of animal life. Roncali holds that they are really vegetable parasites—blastomycetes. He affirms their constant existence in malignant tumors, though often in extremely small numbers. Failure to find them by other observers is accounted for by faulty technique, examination of an insufficient number of sections, and the tendency to early degenerative changes in the parasites, rendering recognition difficult. Large numbers of serial sections should be made from different portions of the peripheral part of the tumor, the parasites being found at the advancing edge. He says that while the supporters of the parasitic theory are in perfect accord as to the different forms, characters, and appearances of the cellular inclusions found in malignant neoplasms—not a single opponent of the theory—those who hold that they are merely nuclear or cellular degenerations—agrees with another as to the kind of degeneration they present.

He figures the different appearances presented by the parasites, and concludes that as regards the etiology of malignant tumors, both adeno-carcinomata of the ovarian gland and many sarcomata, as well as epitheliomata of extremely rapid growth, and essentially malignant, are undoubtedly of parasitic origin, and are due exclusively to blastomycetic infection.

H. B. A.

## BLASTOMYCETES IN HYPERTROPHIED TONSILS.

De Simoni (*Centralbl. f. Bakteriologie*, August 21st, 1896) has investigated 20 tonsils removed from 12 patients with the view of ascertaining the parasite, if any, which leads to chronic hypertrophy. This is ordinarily assumed to be of tuberculous or scrofulous origin, but very little other evidence of tuberculosis can as a rule be found in its subjects. Thus, in the author's patients a phthisical parentage was invariably absent, though scrofulous scars were present in some cases. He made preparations and inoculations from all the tonsils, but was unable to obtain any evidence of the tubercle bacillus. Specimens prepared, however, by im-

mersion in absolute alcohol, coloring with lithium carmine, cutting in paraffin, and finally staining by Gram's method, showed round homogeneous bodies singly or in groups which are classed by the author with the blastomycetes described by San Felice in malignant growths and chronic inflammations. They lay mostly between the tissue elements, but some were intracellular; they were, as a rule, colored an intense violet by the stain already mentioned, but sometimes showed a deeply-stained centre surrounded by a hyaline or pink cortex. In many instances budding was observed, small daughter forms lying beside the larger elements, and either loosely attached to them or quite free. These blastomycetes were found in greater or less numbers in all the tonsils examined; they were particularly numerous where the enlargement was most marked. In normal tonsils obtained from the *post-mortem* room none could be detected. Dr. Simoni considers that chronic hypertrophy of the tonsils is due to the proliferation of granulations set up by these bodies. He promises details as to their growth and cultivation characters in a future memoir.

## THE INFLUENCE OF TEMPERATURE ON INFECTIVE INFLAMMATION.

Penzo (*Archiv. Ital. de Biolog.*, Tom. 28, f. 1, Turin) records a series of experiments dealing with the above question. Into the ears of rabbits he injected staphylococcus aureus and streptococcus. He then placed the animal in a thermostat, and so arranged matters that one ear was exposed to hot air (36° to 39° C.) and the other to cold (8° to 11° C.). In the first series the effect of temperature at the outset of inflammation was noticed, in the second series the effect on the later course of the inflammatory process. The author found that cold hinders and retards the appearance of inflammatory infective processes, weakens their manifestations, retards resolution, and renders the sequelæ more troublesome. Heat hastens the development and course of the inflammation, but favors its limitation, resolution and subsequent effects. Both these modifications are in direct and constant relation with the changes which supervene independently of the nervous system, in the circulation and nutrition of the affected tissues.

## THE MICRO-ORGANISM OF ACUTE ARTICULAR RHEUMATISM.

Triboulet, at the meeting of the Société Médicale des Hôpitaux, of November 19, 1897 (*La Semaine Médicale*, November 24, 1897), reported that he was able to find the micro-organism described by Thiroloix in a fatal case of acute articular rheumatism complicated with endopericarditis. At the autopsy, which was made forty hours after death, both aënrobic and anaërobic cultures were prepared. The pericardial fluid yielded in an anaërobic culture numerous colonies of staphylococci. In similar cultures from the blood of the vena cava, a fragment of heart-vale, and a segment of the spinal cord there grew on sterilized milk a large bacillus. An injection of two cubic centimetres of such a culture into a guinea-pig caused its death in twenty-nine hours.—*Univ. Med. Mag.*

# PAEDIATRICS.

IN CHARGE OF

ALLEN M. BAINES, M.D., C.M.

Physician, Victoria Hospital for Sick Children; Physician, Out-door Department Toronto General Hospital. 194 Simcoe Street, and

J. T. FOTHERINGHAM, B.A., M.B., M.D., C.M.,

Physician, St. Michael's Hospital; Physician, Outdoor Department Toronto General Hospital; Physician, Hospital for Sick Children. 39 Carlton Street.

## UNSUSPECTED NEPHRITIS, AND A PLEA FOR MORE FREQUENT AND CAREFUL ANALYSIS OF URINE.

BY JOHN H. SEILER, M.D., AKRON, O.

It frequently happens in the experience of the life insurance examiner that he finds incipient, or even serious renal disease, when he analyses the urine, in subjects who regard their health beyond question, and consider themselves good risks, there being no symptoms apparent to themselves or observers to lead them to suspect renal derangement.

The largest amount of sugar I ever found in diabetes mellitus was in a German lady, aged about forty, whom I examined for life insurance. She smiled at the idea of calling her health into question. She was a picture of health and the physical examination proved negative. Much to my astonishment the urine was about three-fourths sugar by volume. She died about four months after. Possibly the knowledge of her condition hastened the termination.

So with other diseases, especially Bright's disease, of which I have discovered a number in people who suffered no inconvenience, and suspected nothing wrong.

The same thing I have observed in young subjects, who showed none of the symptoms ordinarily concomitant with renal disorder, such as pain in the back; deficient or excessive urination; pale, or highly colored urine; sediments of various kinds; œdema of face and extremities; ascites; inordinate thirst or precarious appetite.

The following case will serve to illustrate one of these conditions:

A boy, aged fifteen, who, aside from a light attack of measles seven years before, had apparently always enjoyed good health. The father and mother are intelligent and take a great interest in their children.

I wish to emphasize this negative appearance of symptoms, because the pathological condition was extreme. The kidney was found to be so disorganized that I believe I am justified in dating the beginning of the trouble back to his attack of measles, seven years before. If so, if the urine had been examined then, the trouble might possibly have been averted. Therefore, I think we ought to make it a routine practice to examine the urine in cases of exanthematous diseases in children.

Early in June, 1894, the father was in swimming with him, and observed an enlargement of the right side of the scrotum. Suspecting it might be a hernia he attempted reduction in the evening, but with negative results. He had no pain and complained of nothing. Late in June, however, the mother observed that his face was a little full Having a premonition of something serious, she sent for me on June 30th.

*Present Condition.*—Face pallid and slightly puffed; legs, from knees down, a little œdematous; heart action regular, but a little feeble; appetite good; bowels regular; no pain; no swelling about scrotum; no history of chill or fever; urine scant, about one pint *per diem.*

*Analysis.*—Light colored; foamy; slight odor; specific gravity 1005; albumin equivalent to about three-fourths the total volume in test tube; no casts or pus.

*Progress.*—Two weeks later the anasarca became more marked, but never extreme, and at no time interfering with the action of heart or lungs. Ascites at no time extreme. The scrotum was now filled again to its full capacity, and had a bright, shiny look. But by means of astringent evaporating lotions this was soon reduced to normal size and so remained.

There was no nausea, but the stomach was so irritable as to make it almost impossible to retain medicine or nourishment. The bowels moved on an average about once in two to four hours.

At no time did the quantity of urine exceed a pint a day, retaining the same characteristics—specific gravity 1010, the albumin being from one-half to three-fourths by volume in the test tube.

He had uræmic exacerbations about once in six or seven days, which were relieved by thorough diaphoresis, by means of pilocarpine. But the last time, on August 6th, before death came to his relief, diaphoretics, internal and external, had no effect. While before three to four doses of one-twentieth of a grain of nitrate of pilocarpine on the tongue produced all that was desired, at this time one-tenth grain doses every hour failed to act. Uræmic coma came to his relief about midnight.

During the first uræmic exacerbation he had complete paralysis of the right arm, which came on suddenly, remained about twenty-four hours, and disappeared suddenly. During the second exacerbation the left arm was affected in the same way with the right, but only lasted about twelve hours.

A *post-mortem* examination was at first refused, but I was finally permitted to remove the kidney. It being an anomaly, it was only after the most careful and diligent search that I found and extricated the one kidney, which was all he had. This was located on the right side, about opposite the second and third lumbar vertebræ, and was bound down by the peritoneum to the back of the abdominal cavity, as if a cloth were thrown over it.

The kidney was very much enlarged, being about six inches long, three inches wide and two inches thick. The pelvis of the kidney was about three times its normal size. It was light colored, and instead of a smooth, regular outline, it was irregular, and had a nodular feel and appearance. The nodules were not hard, but upon section were found to be full of

urine. The whole cortex was honeycombed, and filled with albuminous urine.

Figure 1 shows the kidney as it appeared when removed. The mottled surface and enlarged pelvis are easily observed. Figure two shows a horizontal section through the body of the kidney, the enlarged pelvis, and the beginning of the ureter. This shows the honeycombed condition of the cortex, and the absence of medullary portions, and the large, irregular shaped pelvis.

The test tubes show the amount of albumin of two of the last analyses, representing nearly one-half by volume.

Another case was that of a lad, who died at the age of sixteen of Bright's disease, in whom were no manifest symptoms till a few months before death. He came from a strong, robust German family, and was the fifth of seven children. He was slender, had a precarious appetite, was constipated and of a bilious temperament.

About ten years ago, my associate, Dr. Geo. G. Baker, now of Denver, treated him for what seemed to be obstruction of the bowels. There was icterus, very obstinate constipation, severe retching and vomiting, small, rapid pulse, tympanites and excruciating pain through the abdomen. Repeated doses of morphine hypodermically was the only thing that afforded him relief till a movement of the bowels was effected, when all pain subsided, and he felt none the worse except very weak. Since then, at intervals of one to two years, I have treated him for similar attacks, lasting generally two or three days. There were no symptoms manifest to lead one to suspect renal derangement of any sort.

Two years ago he began to emaciate, became sleepless and nervous, and suffered from nocturnal emissions. Suspecting masturbation I relieved him of his redundant prepuce by circumcision, and the result was very satisfactory.

Early last spring he had contracted a light gonorrhœa, which was very troublesome. In April he suffered from indigestion, icterus, constipation, which was followed by another of his usual paroxysms of excruciating pain in the stomach and bowels which caused him to draw up his leg against the abdomen. But this time slight convulsive movements were observed once in six or eight hours. Besides he complained of amaurosis and slight occipital headache. While there was no œdema anywhere, and nothing in the appearance of the urine to indicate renal disease, I analysed a specimen of urine, and to my surprise found an abundance of albumin, amounting to about one-half by volume in the test tube.

He was at once put upon a prescribed diet, with very little medicine, and this *regime* was followed carefully with such modifications as were indicated, for about four months. He made remarkable progress, and the prospect for complete recovery was most flattering. The appetite was good; he gained in weight and strength, and the albumin had disappeared entirely for several weeks. But unfortunately he went into the gymnasium and did violent exercise contrary to prescribed rules, which resulted in a relapse, with an abundance of albumin, uræmia, coma, and death, inside of four days.

No *post-mortem* was permitted.

The question arising in my mind with reference to this case is, as to when did this renal derangement begin? Could such a pathological condition, as must have been present here, have been of ten years' duration, and is it possible that these occasional paroxysms, which were described above, could have been associated with a uræmic condition? Since the cause and nature were so obscure till far advanced, might not an analysis of the urine have revealed the secret, and thus possibly have averted this serious consequence?

*Maxims.*—In all cases of diphtheria and the exanthematous diseases, no matter how mild, analyse the urine.

Always when in doubt as to the diagnosis, analyse the urine.

Whether sick or well, make the simple tests for albumin and sugar at least once in six months.

---

LENZMANN, R.—On the Operation for Adenoids, with Special Reference to the question of Narcosis. *Therapeut. Monats.*, September, 1897.

The author first discusses the reasons for and against the use of narcosis in this operation. Most of the arguments against narcosis he considers unsound. It is seldom possible to complete the operation with one sweep of a Gottstein's knife, and even when this is the case the operation is far from painless. Simple examination of the naso-pharynx with the finger is extremely unpleasant, even for adults, and terrifies children.

Naturally, the operation is much worse. This alone justifies the use of chloroform. Further, as we now know that a careless removal of only some of the growth will not necessarily lead to atrophy of the remainder, we are bound in every case to remove the growth thoroughly, and this thoroughness can be attained to only by operating under narcosis.

That this operation makes the use of narcosis in some points specially dangerous the author does not deny; still, he maintains that by care and a suitable technique these dangers can be overcome.

The author has operated on four hundred cases, with no deaths—indeed, with scarcely any unpleasant incidents during either the operations or convalescences. He operates with the patient in the erect sitting posture, does not narcotize deeply and uses no gag, but only a tongue depressor. If the tonsils are hypertrophied he operates on them (with Mackenzie's tonsillotome) at the same sitting. His Gottstein's ring-knife has a special apparatus for holding the excised portion of the growth, and its handle is so curved as to facilitate its introduction and use even when the mouth is not wide open.

Lastly, the author advises that after the operation the parts should be left undisturbed. No insufflation of powder; no nasal or post-nasal irrigations or pulverizations.

ARTHUR J. HUTCHISON.

# MEDICAL SOCIETY REPORTS.

## THE TORONTO MEDICAL SOCIETY.

Regular meeting, February 10th, 1898.

Dr. T. F. MacMahon, President, in the chair.

The minutes of the last meeting were adopted.

Dr. W. J. Wilson reported a case of dislocation of the distal phalanyx of the thumb. It reduced easily.

Dr. Geo. Elliott presented an aneucephalous monster, and described its delivery.

Discussed by Drs. MacMahon, Price-Brown, W. J. Wilson and F. Oakley.

Dr. Macmahon related the history of a fatal case of chorea insaniaus.

Dr. Oakley reported a case of encysted peritonitis, in which operation had been done.

A trunk, showing transposition of organs, sent by Dr. Wishart, and examined by the members.

Dr. Rudolf discussed the case.

Dr. Rudolf reported having used ergot in a case of obstinate constipation with success.

Drs. MacMahon, Wilson, Oakley, Price-Brown, and Graham discussed the case.

## TRINITY MEDICAL ALUMNI ASSOCIATION.

This Association, which was organized on the 10th March, 1893, is enjoying a career of uninterrupted progress.

Its objects are to establish and maintain communication and good fellowship between its members, to encourage a high standard of scholarship, to foster the interests of *Alma Mater*, and to give organized assistance in matters involving the dignity and welfare of the medical profession, especially its own members.

An annual meeting and banquet are held each year, on the day of Medical Convocation at Trinity University, when, in addition to the productions of home talent, papers are read by some of the most distinguished members of the profession in the United States.

The high merit of the papers presented at these meetings, together with the animated and well-directed discussion which generally follows, have made them occasions of great interest and value; and in our experience no day's work done by any of the medical societies equals the day's work done by our Medical Alumni Society at its annual meetings.

The Annual Meeting for 1898 will be held in Toronto on the 6th of April, and the programme will consist of routine business, election of officers, reading of the Theses standing first and second in merit, in competition for the Alumni Gold Medal; a paper by Dr. H. Howitt, Guelph; a paper on "Surgical Diseases of the Rectum," by Dr. F. Le M. Grasett, Toronto; a paper in Medicine by Dr. Charles G. Stockton, Buffalo; a paper in Gynæcology, and a paper in Pædiatrics, by Dr. Leroy Milton Yale, New York.

A discussion will follow the reading of each paper, in which all present will be invited to participate.

*The Banquet*, which will follow in the evening, will be a reunion of old classmates. The Alumni Gold Medal will be presented to the victorious competitor; speech, song and story will enliven the proceedings and render the occasion a most enjoyable one.

It is earnestly desired that as many of the Alumni as possible will be present at the next Annual Meeting. The President and Secretary are assisted by an able and ardent committee, who already have the arrangements well in hand for the coming meeting, which is expected not only to be an occasion of marked interest and profit, but a record breaker in every department.

## TORONTO PATHOLOGICAL SOCIETY.

The regular meeting of the Society was held on January 29th, '98, in the Biological Building, Dr. H. B. Anderson in the chair.

*Present*—Drs. Wishart, Peters, Carveth, Machell, J. J. McKenzie, H. H. Oldright, Wm. Oldright, Primrose, Parsons, Rudolf, Cameron, Pepler, Starr.

Visitor—Dr. Graham.

Minutes of previous meeting approved.

(1) Dr. Peters presented a specimen of carcinoma of the sigmoid flexure of the colon, with notes of the case.

Varicose veins removed from the leg were also shown.

Dr. Peters read a short paper on Hallna Valgus, and showed the head of a metatarsal bone excised for the relief of this condition.

Cases were discussed by Drs. McPhedran, Anderson, and others.

(2) Dr. Wm. Oldright presented microscopic preparations from a mammary growth seen at the previous meeting.

The case was one of adneo carcinoma. It was fully discussed by Drs. Peters, Anderson, Primrose, H. H. Oldright.

(3) Spontaneous Rupture of a Fatty Heart, by Dr. Grieg.

Discussed by Drs. Anderson and Rudolf.

(4) Trepatellar Bursa, with melon-seed bodies, Dr. H. H. Oldright.

(5) Ante-Mortem Thrombus from Chloroform, Dr. Wishart.

Operation for Admoid Vegetations in child. Patient collapsed under chloroform; marked cyanosis and light pulse for 30 hours, terminating in death. Thrombus found in pulmonary artery.

(6) Situs Transversus, Dr. Wishart. All organs transposed; heart to the right; left lung has 3 lobes; liver and cæcum to left; spleen and rectum to right.

Case discussed by Drs. Anderson, Primrose, and others.

(7) Heart in Chloroform Poisoning, Dr. Rudolph.

Discussed by Mr. Cameron.

(8) Umbilical Hernia Containing the Greater Part of the Liver, Cancer of Penis and Lignueal Glands, Tuberculosis of Fallopian Tubes, Dr. Primrose.

Discussed by Mr. Cameron, Drs. Anderson, Peters, and Pepler.

The meeting then adjourned.

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.

EDITOR:
JOHN L. DAVISON, M.D.
ACTING EDITOR:
J. T. FOTHERINGHAM, M.D.
ASSOCIATE EDITORS:

*Surgery*:
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine*:
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology*:
G. P. SYLVESTER, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics*:
CAMPBELL MEYERS, M.D.

*Pathology and Bacteriology*:
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat*:
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D.

*Pædiatrics*:
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M.D.

*Eye and Ear*:
G. STERLING RYERSON, M.D.
C. TROW, M.D.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* The Canada Lancet Publishing Co., 24 Wellington St W., Toronto.

FRED. H. GRAY, Business Manager.

**The Largest Circulation of any Medical Journal in the Dominion.**

## Editorial.

Herpes Zoster, Zona or Shingles, is a disease which, like psoriasis, presents such marked lesions that once seen it is readily recognized when seen again.

It consists of an acute inflammatory eruption, made up of groups of vesicles on an erythematous base, distributed in the course of one or more cutaneous nerves.

The typical form from which the disease takes its descriptive name affects one or more of the intercostal or abdominal nerves on one side only. A neuralgia, varying in intensity, and which in felt in the area in which the eruption will appear, precedes by some hours, or even days, the commencement of the eruption.

In an intercostal herpes one group is situated near the spine, another in the axillary region, and a third close to the meridian line anteriorly; but sometimes a group fails to be developed, or there may be more than one group in each region.

Herpes zoster is by no means confined to the trunk. It may attack any cutaneous nerve, though it has preferences. On the head branches

of the fifth, especially, the supra-orbital are frequently affected. Herpes, when symmetrical, which it very rarely is, is said to be generally of syphilitic origin.

In nearly all cases the disease does not recur; but there are exceptions, one of the most notable being Kaposi's case, in which there were nine distinct outbreaks.

The affection is more common in children than in adults, and in girls than boys. It is rare in infants. Nevertheless, Lomer reports a case occurring in an infant four days old; and, to go to the other extreme, Frich observed in a man æt. 75 a typical case of herpes zoster affecting the entire right side of the neck and face, corresponding with the lower region of the cervical plexus. After ten days of suffering, total paralysis of the right facial nerve suddenly set in. The pain and paralysis gradually diminished and finally disappeared.

In regard to the pathology, it is certain that zoster is produced by an irritative condition in any part of the tract from the cord to the periphery of the nerve supplying the area of skin which is affected.

That zoster is a neurosis it is now anatomically proved. The lesions most often found are: (1) An interstitial neuritis of the posterior ganglion; (2) an interstitial neuritis of the nerve trunk issuing from it; (3) an interstitial neuritis of the posterior spinal root between the cord and ganglion; (4) chronic inflammation of the posterior columns of the cord, the posterior root, ganglion and nerve being unaffected.

The lesion is not necessarily inflammatory hæmorrhage into the Gasserian ganglion, and canda equina have caused herpes frontalis and cruralis respectively.

The occurrence of zoster in persons taking arsenic has now been sufficiently often noted to point to an etiological relationship, and one which is readily explained by the toxic action of arsenic on the peripheral nerve endings. It must, however, be stated that many authorities regard herpes zoster as an acute specific and infectious disease, and in many of its features it certainly presents a family likeness to the exanthemata. It has a definite duration, it is anteceded by pyrexial symptoms, it presents eruptive phenomena which go through stages of maturation and decline; that it generally occurs in small epidemics, recurring regularly in spring and autumn; that it is very unusual for a person to be affected twice, and that the various epidemics exhibit a similarity in the severity or mildness of the majority of cases occurring in any one epidemic. There are, however, so many sporadic cases which can be traced to a definite cause that epidemic influence can only rank as one of the etiological items.

In regard to its causation, it is well to remember that in not a few instances herpes zoster has been found occurring in connection with caries of the spine, and in all cases of zoster it is worth while to examine the spine, since the eruption may be the result of lesions starting in the spinal column.

The diagnosis is usually not difficult. The large size of the vesicles in herpes, which dry up instead of rupturing and discharging, and the nerve distribution are distinguishing features from eczema.

It is doubtful if treatment has any effect on the duration of the disease. If the neuralgia persists, hypodermic injections of morphia are sometimes required. The continuous current applied before the appearance of the eruption will sometimes abort the impending attack

## AN ACADEMY OF MEDICINE FOR TORONTO.

At a recent meeting of the Toronto Medical Society, on seconding a resolution looking to the securing of more commodious quarters for the Society, Dr. C. R. Dickson took occasion to remark that his chief object in supporting the motion was the hope that it might prove the initial step in bringing together the various medical societies of the city, and the formation thereby of an Academy of Medicine, where all might meet occasionally on a common ground, while the rights and privileges of each existing society would not be interfered with, the result of which would be a conservation of energy as of interest, of time as of means, and withal, increased attendance and increased usefulness for all concerned.

Dr. Dickson described a visit which he had paid a few days previously to the Buffalo Academy of Medicine, and the harmonious and eminently satisfactory manner in which its work was carried on. Buffalo, until within a few years, had labored under the same disabilities as Toronto in the matter of multiplicity of medical societies, with their demands upon the time and energy of the busy practitioner who wished to be a member of more than one; but in 1892 a change was decided upon at a joint meeting of the societies, and now instead of the Medical and Surgical Association, the Obstetrical Society, the Pathological Society, and the Clinical Society, we find, respectively, the following "Sections" of the Academy of Medicine, viz: a Section on Surgery (including Ophthalmology, Otology, Laryngology, Genito-urinary and Orthopedic Surgery); a Section on Obstetrics and Gynæcology; a Section on Anatomy, Physiology and Pathology; and a Section on General Medicine (including Materia Medica and Therapeutics); with a provision for future Sections if necessary. Each of these Sections has its own Chairman and Secretary, and each prescribes its own requirements for admission and other regulations for its government in harmony with the general regulations of the Academy. The Sections meet in rotation, each, once in four weeks; the stated meetings of the Academy are held quarterly, and at the commencement of the season there is issued a complete programme in a neat and concise form; thus we find items of interest for each Tuesday evening from September 14th, 1897, up to June 28th, 1898.

The officers of the Academy are the President, four Vice-Presidents (the Chairman of the aforesaid Sections) Secretary, Treasurer, three Trustees, and a Board of Councillors consisting of the above-mentioned officers, secretaries of Sections, and the President of the preceding year.

From all of which it must appear that there should be no great difficulty in bringing about a similar happy condition of affairs in our own medical circles, a consummation devoutly to be desired, and it is a matter for congratulation that at the very next meeting of the Toronto

Medical Society following that referred to above, a committee was appointed consisting of the President, Treasurer, and Drs. Machell and Ross, to confer with similar committees of the other medical societies in the city with a view to the establishment of an Academy of Medicine.

We trust that this committee will leave no stone unturned to accomplish this most desirable object, and that ere long we shall witness the establishment of the Toronto Academy of Medicine. We are aware that in the Pathological Society some years ago an attempt was made to set such a scheme going, so that probably all existing organizations will be ready to acquiesce, more particularly as there is no loss of identity or autonomy. The success of the change in Buffalo means equal success here if the scheme is carried through.

## SYPHILIS AND CIVILIZATION.

One of the most notable communications presented at the late International Congress at Moscow was that by the distinguished Austrian alienist, Krafft-Ebing, on the etiology of progressive paresis. It created the more sensation from the fact that it coolly reported a pathologic experiment of a character that would of all others be likely to call out comment and reprobation from those who are always ready to criticise such attempts to increase our knowledge at the apparent expense of patients under medical care. A much less obviously equivocal one by a Baltimore professor has led to some severe comments from the other side of the water, and it is rather remarkable that thus far we Americans, against whom Europe seems at present to have a general grudge on politicial and economic grounds, should have been so forbearing under a still more aggravating occasion.

While Krafft-Ebing's experiment of inoculating paretics with chancre virus to demonstrate their non-inoculability by syphilis and hence their prior syphilisation, was certainly a bold experiment to report, and certainly open to sentimental if not to other more weighty objections, it is a very interesting fact, and, in the main, is strongly confirmatory of the opinion that is now all but general, that paresis is a sequence, if not a direct result of syphilitic infection in a vast majority of cases—indeed, it may probably be said that it is such in all but very exceptional instances. His deduction from this with the other data we have on the subject that its two great etiologic factors are, as he puts it, syphilisation and civilization, the stress of modern life acting on a system prepared by the results of earlier infection, is likely to be accepted as the correct one by alienists generally, though there are yet, and possibly may be for a long time in the future, some few who will reject it against all the weight of evidence in its favor.—*Editorial Journal American Medical Association.*

DRUG ERUPTIONS.—The addition of a small amount, say $\frac{1}{10}$ grain, of arsenious acid, is of material aid in preventing the appearance of drug eruptions, as of the bromides, salicylates, iodides, etc.—HELLER.

# PUBLISHERS' DEPARTMENT.

ANGIER'S PETROLEUM EMULSION is comparatively a new preparation in Canada, but has been used in the United States and England for years. It is devoid of the unpleasant fishy odor of cod-liver oil, and proves about as efficacious; and, like creosote, possesses a tonic action on the stomach, and is also a germ destroyer; and wherever it has been used it meets with general favor by the profession.

---

NEW BUSINESS OFFICE FOR THE "LANCET."

We extend a cordial invitation to the profession to call upon us at our new offices in the Gray Building, 24-26 Wellington Street West.

We want our subscribers to feel that these offices are always at their disposal, and Mr. Gray, our Business Manager, will be glad to do everything he can to make a visit a pleasant and profitable one for all who may call upon us.

---

NOT A SINGLE MISHAP.

The magnificent reputation acquired by Parke, Davis & Co's. Serum in hospital and private practice remains unmarred by a single fatality or accident, and this complete immunity may be in part attributed to the germ-proof, hermetically sealed glass bulbs in which the Diphtheria Antitoxin is marked.

Thousand of physicians will bear out the statement made by Dr. Burt Russel Shurley, Laryngologist to the Detroit Poor Commission, "Its injection is as harmless as that of so much pure water."

---

DOMINION DYEWOOD & CHEMICAL CO.—We beg to call attention to the advertisement of the Dominion Dyewood & Chemical Company, Toronto, who are sole agents in Canada for "Friedr, Bayer & Co.'s Products."

The high reputation enjoyed by Messrs. Friedr, Bayer & Co. throughout the world as manufacturers of pure products need not be dilated upon. Their many new preparations may now be had from the Dominion Dyewood & Chemical Company, who will be glad, on application, to furnish the profession with special literature dealing with these special products.

---

CON-UMPTIVES' DIET.—The many virtues of Kefir Kunung have long been known in cases of Tuberculosis and Wasting Diseases. It is stated by travellers in Armenia, where Kefir is a daily food, that cases of Phthisis are very rare. In New York city it has yielded excellent results for some years past, but in the smaller cities it has never been at the disposal of the profession.

The first genuine Kefir to be made in Canada can now be obtained from a reliable maker. It is a safe food in every sense. The milk is sterilized by live steam. The casein is very minutely sub-divided, and the thorough peptonization of the albuminoids is proved by its thick, creamy consistence.

The Medical Profession having discovered the usefulness of "Liquid Extract of Malt," both as a remedial agent and food product, and Canadian Barley Malt being the recognized standard of quality all over the United States and Canada, another field has been opened for manufacturers in this country.

In this connection we have pleasure in calling the attention of our readers to an advertisement on another page regarding "O'Keefe's Liquid Extract of Malt." Both the well-known facilities of "The O'Keefe Brewery Co., Ltd.," for the preparation of such an article and the extensive reputation which Mr. W. Lloyd Wood enjoys for handling only the best goods, should be a sufficient guarantee for the quality of this preparation.

---

SOMATOSE IN CASES OF DEFICIENT LACTATION.—The following case, reported by Dr. W. I. Thayer (*Americ. Homeop.*, July, 1897), illustrates better than any extensive discussion the beneficial results obtained from its use in this class of cases: "A primipara who secreted only a limited amount of colostrum, and kept that up so that the child was crying from hunger and had to be artificially fed, was put upon Somatose, 4 teaspoonfuls a day, and in 3 days the patient secreted a sufficient quantity and quality of milk to satisfy the child, which increased one-fourth of a pound regularly each week. It seemed difficult to induce the mammary glands to perform their proper function; but when Somatose was given there was a normal supply of milk, and the child was properly nourished without artificial feeding."—*The Trained Nurse*, December, '97.

---

We have to announce a change in the head office of the Canadian Branch of Messrs. Scott & Bowne, the well-known manufacturers of that standard preparation, Scott's Emulsion. Mr. Charles Fowler, who has had the management during the past year, having returned to the head office in New York, has been succeeded by another New Yorker, Mr. Geo. C. Hawkins, who, although he has been here but a very short time, is already spoken of in the most extravagant way by the members of the profession with whom he has come in contact. This is only what was to be expected, and the LANCET predicts an exceptionally improved year for this standard old remedy under such careful, courteous management. Mr. Hawkins is no novice at this business, he having been brought up, as he laughingly expresses it, on Scott's Emulsion. Beginning his business career with the firm and remaining with them steadfastly until the present time, he rapidly evinced a marked adaptability for this particular line. He was quickly promoted, until having given every evidence of being possessed of executive ability in an exceptionally marked degree, he was entrusted with the present responsible position of General Manager of the entire Canadian trade. Mr. Hawkins has more the appearance of one of our big, rugged specimens of a Canadian than what we usually see in a New Yorker. Mr. Hawkins will be delighted to meet any member of the medical profession at any time at the Toronto office, 55 Front Street West, and will be only too pleased to expound the merits of Scott's Emulsion of Cod Liver Oil.

# The Canada Lancet.

VOL. XXX.] TORONTO, APRIL, 1898. [No. 8.

## ORIGINAL ARTICLES AND COMMUNICATIONS.

### THE PRESENT STATUS OF THE RADICAL CURE OF HERNIA.

MR. PRESIDENT AND GENTLEMEN,—In appointing this subject for discussion, no doubt your committee had more particularly in view the inguinal form of hernia, which is the variety constantly met with in practice. I shall, therefore, largely confine my remarks to this class of cases and should time permit will give a brief resumé of the data and procedure in the radical cure of the more uncommon varieties, viz.: Femoral and Umbilical Hernia. In discussing the present status of the radical cure of hernia three questions naturally present themselves:

I. What degree of success may be anticipated as the result of a modern operation for the radical cure, if properly carried out?

II. Under what circumstances should we advise the operation?

III. What method should we adopt?

The answer to the first question must essentially be somewhat statistical. W. T. Bull has collected 5,000 operated upon, with 58 deaths or 1.16 per cent. He estimated that from 60 to 90 per cent of all the cases were permanently cured. Bull and Coley, of New York, have operated upon 300 cases by Bassini's method, with three deaths and seven relapses, the relapses being very slight. Bassini reported 262 cases with seven recurrences and no deaths; Macewen mentions 98 cases with one recurrence and no deaths. Quite recently, Marcy, of Boston, publishes the fact that in a series of nearly 400 cases operated upon he has not seen a single case in which the patient's life was endangered when the integrity of the intestine was not involved. His experience also establishes the fact that over 90 per cent. of the cases are permanently cured by the operation. Without multiplying statistics it may be positively stated that the percentage of deaths when the operation is carefully carried out is less than one per cent.

The percentage of recurrences will depend largely upon the operator, but from all the statistics at present at our disposal, I should be inclined to place 20 per cent. as the extreme, and at the same time I beg to remind you that the figures are improving every year as the technique becomes more perfectly understood. Surely, when we find it positively stated that Bassini, Marcy, Macewen and Coley in the aggregate did 1,041 radical cases with but one death, we should the less hesitate to recommend the operation.

In reply to the second question, I beg to note that it appears to have

been fully proven that children are more favorable subjects for the operation than adults. Certainly, if the weakness in the abdominal wall of the child be due to imperfect development of the structures, a cure may be obtained by the judicious pressure and support of a truss. But I think all will agree with me as to the difficulty of retaining a hernia in a restless, perhaps suffering child. The pressure irritation of the truss itself is also a factor not to be despised.

Age limit is indefinite. Marcy has operated on children at 2 months and on men at 80. Infancy does not appear to militate against the operation. I have myself operated upon two cases of double inguinal hernia in children, one at 6 months, the other at 3 years. Both resulted in permanent cure.

Only last week, at the request of the attending physician, Dr. McPherson of this city, I operated on an infant at 2½ mos. for a very large congenital inguinal hernia, which they had utterly failed to retain by mechanical means. As to the opposite extreme of life to be selected for the limit, I should say that after the active period is passed it is a mere question of expediency which the patient must decide.

Dr. Garmo, in analyzing 1,000 cases in private practice treated by truss, showed that about one-fourth were cured, i.e., remained so for six months without support. Mr. Spanton in his address before the International Medical Congress recorded the fact that out of a total of 96,866 persons relieved by trusses only 4.53 per cent. had been cured. Such facts might be multiplied, but to reduce our answer to question II. to categorical form I should say that the operation is indicated.

1. In children after a brief but careful trial of mechanical treatment has failed from any cause.
2. In adults with irreducible, inflamed, or strangulated hernia.
3. In adults who wish to enter the Civil Service.
4. In adults when the truss is painful or incompetent.
5. In adults when the truss interferes with the duties of life.
6. In all cases of femoral hernia (of this I shall speak later).
7. In all cases of umbilical hernia where a truss has failed to cure.
8. In cases complicated by a hydrocele or an abnormal position of the testicle.
9. In that large class of cases mentioned by Park where, owing to incompetency, ignorance, poverty or occupation, there is a lack of requisite time and care so necessary for the conduct of mechanical treatment.

Now as to the third question, with which the brief paper began, viz.: The method of operating. The plans by which the older surgeons endeavored to obtain closure of the ring and canal were as follows:

1. Irritation by injection near the pillars.
2. Irritation by pressure in the same location.
3. Subcutaneous suturing.

Since the advent of true aseptic surgery these methods are abandoned for obvious reasons and the modern open operation substituted. Among what may be called modern operators all are agreed upon certain points, viz.:

1. Strict asepsis is absolutely necessary.

2. If compatible with safety the cord should be reduced in size so that the resulting canal may be as small as possible.

The questions in dispute are briefly:

1. The retention or removal of the sac.
2. The transplanting of the cord or its retention in its original canal.
3. The ideal suture material.
4. The method of suturing.

Macewen, Packard, Roche, and, later, Ferguson, of Chicago, retain the sac, and use it by various means as a plug to close the internal ring; while Marcy, Barker, Bassini and Halsted, following Czerney and Banks in their teachings, remove the sac entirely.

The remaining differencee will be incidentally noted in the following brief outline of the principal methods at present in vogue, and I shall then endeavor to show why certain methods are to be preferred, prefacing the description with the statement that any of the methods mentioned will produce a large percentage of excellent results when carefully and intelligently carried out.

I. BANKS' OPERATION.—The sac is exposed, isolated, and opened, and after reduction of its contents a ligature is applied to its neck high up, and after excision of the sac below the ligature, the internal ring is closed by silver wire sutures and the operation concluded by closing the skin wound.

II. BARKER'S OPERATION.—The sac is exposed by an incision similar to the last, viz: in the direction of the cord, and beginning about the external abdominal ring. The neck of the sac alone is isolated well up to the internal ring, and tied high up, leaving the two ends of the silk ligature quite long. The sac is now cut across half an inch below the point of ligature, and the lower part left in situ, in order to disturb as little as may be the constituents of the cord. With a Liston's needle, guided by the finger in the canal, the long ends of the ligature are now passed successively one through each pillar of the internal ring and then tied firmly, thus including the stump of the sac and the two pillars in a single mass. If necessary, the lower part of the ring is then occluded by one or more additional sutures. Finally the skin wound is closed by the ordinary running suture.

This operation, slightly modified, is largely used in this city in the treatment of hernia in children and infants. The modification consists in the separation of the sac from the cord below the ligature and its removal, except in cases of congenital hernia, when the lower portion of the sac is left in situ to form a tunica for the testicle.

III. MACEWEN'S OPERATION (1886).—The sac is dissected out through a similar opening, and separated from its connections, is puckered up by means of a suture, and is so drawn upward as to form a pad upon the abdominal aspect of the hernial opening. The ring and canal are then closed by silk sutures, and finally the skin wound closed. This has undoubtedly been an efficient method in many old-standing cases where from prolonged dragging the internal ring has become unusually enlarged and patent. Yet, in recent cases, experience has shown that the retained sac is liable to sloughing, and acting as a foreign body may thus entirely

defeat the object aimed at, viz: complete and firm closure of the ring and canal. Besides, to the average practitioner it is a somewhat more difficult operation than the other described.

In none of these methods described, you will observe, is the canal laid open to the internal ring, and, therefore, the greatest weakness in the abdominal wall, and the one factor which most predisposes to hernia, is never fully recognized, viz: the relaxed transversates fascia. The tension of the fascia must be restored before one can feel satisfied with any operation. It seems to me that another element in the success of the operation has not been fully realized in the methods mentioned, viz: the complete removal of all abnormal or unnecessary material from the canal before endeavoring to secure the restoration of the integrity of the abdominal wall.

IV.—McBURNEY'S OPERATION.—This was a decided advance, in that he opened the canal to the internal ring and removed all foreign substances from the canal. The mistake consisted in allowing the wound to heal by granulation.

The closure of the canal by a large cicatricial mass was not efficient, as experience proved that in time the plug was absorbed, and recurrences were the rule. Now the object is to obtain closure with as little cicatricial tissue as possible.

V.—BASSINI'S AND HALSTED'S OPERATIONS.—In 1888 and 1889 the authors of these methods published descriptions of these operations.

Before he first published his method Bassini had used it in operating upon 262 cases, with one death and seven relapses. Halsted had only some half-dozen cases to report.

For a detailed description of these methods I refer you to Dennis' System of Surgery, Vol. IV., pp. 184-7.

In both the incision is carried from about the centre of the external ring to a point external to and beyond the position of the internal ring.

Halsted's is, however, the much more extensive operation, as his incision through all the structures down to the peritoneum is carried through and beyond the internal ring for a distance of 2 cm. external to and above it; so that his operation is really a laparotomy, and to some extent must weaken the abdominal wall. This weakness he claims to be more than counterbalanced by the complete obliteration of the old internal ring which is in the track of his incision.

On the other hand, the incision which Bassini carries above and external to the internal ring is only through the external oblique muscle. Bassini allows the cord to emerge through the outer part of the internal ring; Halsted obliterates the internal ring entirely, bringing the cord out through his incision in the abdominal wall at a point above and external to the internal ring.

It will be seen that in both methods the canal is opened up; in both the cord is transplanted and the old canal closed behind it. Bassini places the cord between the internal and external oblique muscles. Halsted brings it down subcutaneously, superficial to the external oblique. Halsted suggested the routine practice of suturing the stump of the sac instead of ligating it, and of invariably reducing the size of the cord where

possible, by removing any superfluous veins contained therein. To him also is due the introduction of the mattrass suture in closing the canal. While Bassini uses silk for his buried sutures, many now prefer kangaroo tendon, first suggested by Marcy, of Boston.

These are the two methods now adopted most frequently in operation upon adults, and properly so as most essentially scientific, and as having proven by experience most successful in obviating recurrences. The principal danger to be guarded against in carrying out the method is strangulation of the cord, which may be easily avoided by care and judgment in the introduction of the first or highest sutures.

Another apparent objection to Halsted's method which time may disprove is, that he would appear to have introduced a tendency to the formation of a direct hernia, bringing the cord out as he does directly through the abdominal wall.

As Dr. Garmo has pointed out, one secret of their success is, that the canal is cleared of all foreign substances, so that repair begins at the internal ring and the structures are restored to as nearly a normal condition as possible.

The difficulty that I have encountered has been rather due to the irritation produced by the buried silk sutures, leading occasionally to suppuration, which prolonged, if it did not otherwise interfere with, convalescence.

To obviate this difficulty I have several times used catgut in children, and kangaroo tendon in adults, the former being too rapidly absorbable to be available in adults.

It seems that tendon, if properly prepared, is the best buried suture material we have at present, though not the ideal one.

Femoral Hernia.—This is much more difficult to retain by truss, is much more liable to strangulation, owing to the nature of the canal, and is, altogether, a more dangerous form of rupture. For these reasons most surgeons are inclined to agree with Championniere, that all cases of femoral hernia in the female should be operated upon, the general conditions being favorable. Statistics also show that cure in this variety is more certain and lasting than even in the inguinal form.

The best operation for this purpose is, perhaps, that recommended by Bassini. It may be summarized as follows: An incision just below and parallel to Poupart's ligament, with its centre over the tumor. After the sac has been exposed, isolated, and opened, and its contents reduced, as in inguinal hernia, it should be ligated high up and removed.

The canal is closed by uniting the falciform edge to the pectineal fascia. Then the femoral ring is closed by sutures, uniting Poupart's ligament with the pectineal fascia, and, finally, the skin incision sutured.

Bassini reports fifty-four cases so operated upon, with no deaths and no recurrences.

Umbilical Hernia.—In children this is frequently cured by a truss. In adults it is very difficult to so retain the rupture, and operation gives good results.

An elliptical incision is made over the tumor including much of its

covering and opening the sheaths of the recti. After reducing the contents and removing sufficient of the sac, approximate the cut edges of peritoneum, suture the bellies of the recti together and close the skin wound.

You will observe I have not mentioned ventral hernia. Each case must be treated upon its merits. Nor have I had time to discuss the obvious variation in method should our hernia prove to be congenital. This fact is readily determined as soon as the sack is first opened and explored by the finger. Should this state of things be discovered, the lower part of the sac should invariably be retained for the purpose of forming a tunica vaginitis for the testicle.

While fully realizing that circumstances may occur during an operation to induce the spectator to modify his mode of procedure, we may sum up the teachings of modern surgery in regard to the radical cure of hernia as follows:

1. It is not only a justifiable operation, but its results are among the most brilliant in modern surgery.
2. Strict asepsis is absolutely indispensable.
3. The canal should be fully opened up, at least in all adult cases, as in no other way can the tension of the transversatis fascia be satisfactorily restored.
4. In children and infants, Barker's method, without fully opening the canal, is a competent operation.
5. All unnecessary contents of the canal should be removed, such as the sac, enlarged veins, fatty tissue, and adherent omentum.
6. In certain cases with very large internal ring, the sac may be advantageously utilized, as in Macewen's operation.
7. Tendon is the best available material for buried suture.
8. The cord should be transplanted and the old canal carefully closed.
9. The patient should be kept in bed for three weeks after the operation.
10. A neatly fitting bandage (not a truss) should be worn for a month or two after the patient is allowed to go about.

---

## *A CASE OF MALIGNANT ENDOCARDITIS DUE TO PNEUMOCOCCUS INFECTION THROUGH THE APPENDIX VERMIFORMIS, WITH REMARKS ON INFECTIONS BY THIS ORGANISM.

BY H. B. ANDERSON, M.D., C.M.,

Professor of Pathology Trinity Med. Coll., Pathologist to Toronto General Hospital, Physician to St. Michael's Hospital, etc.

J. H., aged 38, captain on lake steamer. Patient was a strong, well-developed man, of medium height and weight; used tobacco and alcohol in moderation. For six months before his death he had been

* Read before the Ontario Medical Association, June, 1892.

under treatment for syphilis, the signs of which, except slight pigmentation over the tibiae, had quite disappeared. He had never suffered from rheumatism or other severe illness except syphilis, as mentioned.

Family history showed a tendency to heart trouble. His father had suffered from rheumatism, and died suddenly, presumably from heart disease. A brother also died very suddenly from the same cause. Two sisters—aged 9 and 18—have well-marked mitral murmurs. Previous to his fatal illness patient had been in Hamilton, and was in his usual good health until the night of March 18th, when, after indulging in a heavy supper of flap-jacks, etc., he was taken suddenly ill with a severe chill, intense colicky abdominal pain, vomiting and diarrhœa.

He was relieved by the application of poultices, and was able to return to Toronto next day. Though still feeling miserable, having nausea, loss of appetite and general malaise, he continued to go about until March 22nd, when he consulted Dr. Bingham, to whom I am indebted for notes on the case, and by whose kind permission I report it.

At this time his temperature was 101, pulse 100. He had no abdominal tenderness. Tongue was furred, complained of feeling chilly, had nausea and loss of appetite. He was advised to go to bed, keep quiet, and if he did not improve to send for the doctor. Dr. Bingham heard no more of him until March 26th, when he was sent for. During the interval all his symptoms had become aggravated. His morning temperature was 102, pulse 110; evening temperature 103, pulse 120. Auscultation revealed the presence of an aortic systolic murmur. The patient had severe chills, followed by sweating; tongue was dry and brown, and the nausea and vomiting persisted. As the condition was strongly suggestive of a general bacterial infection, I was asked by Dr. Bingham to make cultures from the blood, with a view to ascertain if a septicæmia existed, and, if so, the organism that was producing it.

This was done on March 28th. The full of a sterilized hypodermic syringe of blood was drawn from the median basilic vein, and blood serum and bouillon tubes inoculated therewith. These tubes kept at incubation temperature remained sterile. The blood was also examined for the plasmodim malariae and the serum reaction for typhoid fever applied, both, however, with negative results. No evident leucocytosis was present.

The chills and sweats continued; the temperature became higher, rising to 104⅘; pulse and respiration became more rapid; he sank rapidly, became delirious, comatose, and died at 8.25 a.m. April 1st, less than 13 days after the initial symptoms appeared.

Autopsy was made, 7½ hrs. post-mortem, and showed as follows:—

Nutrition and muscular development were very good. Rigor mortis, firm. Marked post-mortem staining on dependent parts.

Peritoneal cavity contained no excess of fluid. Peritoneal endothelium was somewhat hazy in appearance.

The vermiform appendix showed marked injection of the vessels in its peritoneal covering, but no lymph deposit or adhesions. About the middle of the appendix a small localized, dark shading was apparent through its peritoneal covering. On opening the appendix a small quan-

tity of muco-purulent material escaped from it. About its centre was a small necrotic focus $\frac{1}{8}$ in. in diameter, corresponding to the dark shading noted from the exterior. No foreign body was present in the appendix.

The spleen was enlarged and soft, and contained two small infarctions. The liver was large and very friable, congested and presented a peculiar mottled appearance. The portal vein contained a decolorized ante-mortem clot which extended some distance into its smaller branches. The thrombus was non-adherent, pretty firm, and showed no evidence of breaking down or of pus surrounding it. Microscopic examination of the liver revealed marked fatty degeneration. Kidneys showed marked parenchymatous and fatty degeneration. Stomach and intestines were congested—otherwise normal.

The pleural and pericardial cavities contained a small quantity of clear serous fluid.

Both lungs showed hypostatic congestion and œdema, but were crepitant throughout.

Heart-muscle was soft. Right side was full of dark fluid blood. Left side was contracted and empty. Mitral segments were thickened from old fibrosis, but showed no recent vegetations.

The aortic valves showed recent vegetations, one segment being perforated, and the sinus behind it almost filled with a vegetation which was pretty firmly adherent.

Bacteriological Examination :—Cultures were made at the time of the post-mortem examination from the peritoneal cavity, the blood from the right auricle and from the spleen. All remained sterile.

Cover slips from the vegetations in the aortic valves showed an encapsuled diplococcus.

This was the only organism present, and in morphology it had the typical appearance of the micrococcus lanceolatus (or pneumococcus). This was confirmed by cultures. Unfortunately the pus from the interior of the appendix was not examined.*

However, I think there is little doubt that the appendix was the point of entry of the organism into the system. No pneumonia or other local lesion was present, and in this regard the initial symptoms of vomiting and diarrhœa following an indigestible meal are of importance as directing our attention particularly to this part. Hereditary weakness of the heart and the antecedent syphilis, as shown by the history, no doubt rendered this organ a *locus minoris resistentiae* which determined the localization of the infection in it. The symptoms of nausea and vomiting were so persistent and marked throughout the whole course of the disease that a possible explanation of their intensity is suggested by the portal thrombus, with resulting passive congestion in the stomach and intestines. The presence of this thrombus is best explained by an infection atrium in the intestinal tract, whence the bacteria were carried into the portal blood. That the micrococcus lanceolatus is a frequent inhabitant of the intestine is well known, and this is not surprising when we are informed by Netter that it is present in a virulent form in the mouths of from 15 to 20 per cent. of healthy individuals, and, according to other

* The autopsy was made at a private house, and by some mistake the appendix was lost.

authorities, more or less virulent forms are constant inhabitants of the buccal cavity. From the mouth the organisms are readily carried into the intestine, with the food. The micrococcus lanceolatus is peculiarly sensitive to an acid medium, so that ordinarily in health it is probably destroyed by the gastric juice. There are periods, however, in the intervals of digestion in which an acid reaction is absent, and this often occurs in the course of certain diseases when the secretion is in abeyance or altered in its reaction. There is thus abundant opportunity, as pointed out by Flexner and Barker, for the organisms to reach the intestine from the mouth unharmed. These authors, from a study of an epidemic of cerebro-spinal meningitis due to the micrococcus lanceolatus, at Lanaconing, in Maryland, in 1894, after discussing the various possible points of infection, produced evidence which led them to conclude that the infection was probably through the blood, "and that the intestinal tract may be regarded as the way of entrance, if not in all, at least in many cases."

In two cases of peritonitis reported by Flexner, in which the micrococcus lanceolatus was the pathogenic agent, the infection was by way of the intestinal canal, and in one of these he was able to trace the organism from the mucous surface into the glandular layer and on to the subserous lymph spaces. Inflammatory lesions in the intestine with diarrhœa or dysentery, seem often to precede this mode of infection.

In acute croupous pneumonia the lobar distribution of the lesion, as pointed out by Coates, suggests an infection through the blood, and the anatomical relationship of the lungs to the blood current would help to explain the frequency with which the organism produces its pathogenic effects in *these* organs, apart from the fact that they appear to be a favorable seat for the growth of the germs. After having once gained an entrance to the blood, the ultimate localization of the lesson which they will produce appears to depend largely upon the existence of a *locus minoris resistentiæ* in the particular case. Thus, in some cases, the organisms produce an acute croupous pneumonia, with or without such concurrent lesions as pleurisy, pericarditis, malignant endocarditis, meningitis, arthritis, peritonitis, etc., in all of which lesions, if present, pneumococcus has been found. So, too, any of these lesions may be produced by the pneumococcus entirely apart from the existence of pneumonia. In other cases the pneumococcus is widely diffused through the blood, producing a true pneumococcus septicæmia, corresponding to the *usual* type of disease produced by experimental inoculation in susceptible animals. This condition appears to depend upon the virulence of the organisms and the resisting power of the individual. This pneumococcus septicæmia may be present, also complicating pneumonia or other more local lesions, producing a severe and often a rapidly fatal type of the disease.

The micrococcus lanceolatus is, according to Flexner's statistics, next to the streptococcus pyogenes, the organism most frequently found in the terminal infections of chronic diseases of the heart, liver and kidneys. Thus, from a consideration of the diseases in which it may give rise, we are in a position to appreciate Welch's statement that it is an organism of the most manifold pathogenic possibilities.

In lobular pneumonia, in which it is sometimes found, the distribution

of the lesion suggests a local infection, by way of the bronchical tubes, by inhalation.

From its frequently being present in discharges from the ears and nasal passages, it is probable that there are also sources of systemic infection in some cases.

The early investigations of Sternburg, Talamon, Fraenkel, Weichselbaum and others established this organism as the specific cause of the majority, and, perhaps, all cases of acute croupous pneumonia before its etiological relationship to so many other pathological conditions was known, thus accounting for the name diplococcus, pneumonia or pneumococcus, which is commouly applied to it. Considering the fact that it is now known to produce lesions in so many other organs and tissues of the body, it is particularly unfortunate that it should be designated by a name suggesting an exclusive relationship to one disease. This has given rise to much confusion, and has, perhaps, led among physicians generally to an underestimation of the pathogenic effects produced by the organism in structures other than the lungs.

Consequently, many other names have been applied to it, of which the one given to it by Talamon, micrococcus lanceolatus, is, according to Welch, perhaps the least objectionable.

A consideration of the wide distribution of the micrococcus lanceolatus and its great pathogenic possibilities, enables us to take a wider view of the conditions present in croupous pneumonia, directing our attention more to the evidences of systemic poisoning produced by the toxines of the organism, to evidences of infection of the blood or other organs, than to too close a consideration of the local condition in the lungs. In brief, it is probable that the local reaction in the lung is rather a conservative or protective process, attempting to wall off and so guard the system from a general infection.

---

NERVOUS AND MENTAL DISEASES AMONG THE JEWS.—The following rather startling reference to the Jewish race is made in the review of the work of Dr. Buschan, the anthropologist (who has attempted to investigate the forms of nervous and mental diseases peculiar to the different races of mankind), by the *Journal of Mental Science.*

"Dr Buschan brings out in clearness and detail the great frequency of insanity among the Jews. From all the information gathered, it appears that with the Jewish population mental derangement is from four to six times as common as in the Gentile. Even in Palestine this proclivity holds good. According to Tobler, almost all the Jewish women are hysterical. Diabetes is very common, but it is doubtful if epilepsy is more common. As Ziemssen has observed, there is a neurotic strain through the whole race of Israel. The extraordinary proclivity to mental disease is not due to heightened mental exertion, since many Jews, as in Hungary and Poland, lead a very quiet life, and yet there the tendency to neuroses is still marked. May we not seek the cause in the long continued persecutions which have followed these people through so many generations, and to the frightful struggles and sufferings they experienced in the middle ages?"—*Pœ. Med. Journ.*

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

## SURGERY FOR TYPHOID PERFORATIONS.

BY JOSEPH PRICE, M.D., PHILADELPHIA.

I submit the following report of cases operated on for typhoid perforation for the lessons they may convey, and will discuss them from the standpoint of our more recent experience.

CASE 1.—Mrs. A. O., aged thirty, having several children, but without a history of miscarriages, was admitted to the hospital on October 2, 1896. She was seen by Drs. Hughes and Owen in consultation after some three weeks of illness, with a typical history of typhoid fever. Operation was performed on October 1st. Symptoms of perforation were present with well localized attacks of peritonitis and an irregular and ill-defined tumor on the right side. Omentum and small bowel were found adherent in the region of the ileo-cecal valve. The adhesions were easily freed and two perforating ulcers, six inches apart, were found. The lower one, situated a few inches from the valve, was large, irregular, and necrotic; the second one was higher up in the bowel, about one-half inch in length, well defined, and less healthy in appearance.

A puddle of filthy fluid was found about the perforations, and the omentum and appendix were also involved in the adhesions. The infected portions of the omentum and appendix were removed. The holes in the ileum were trimmed and sutured, and an irrigation toilet was followed by both glass and gauze drainage. The mesenteric and retroperitoneal lymphatics were generally enlarged and easily recognized by touch and sight. Recovery ensued without a hitch.

CASE 2.—Mrs. B. K., a married woman, aged twenty-six, with two children and a history of one miscarriage, was admitted to the hospital on June 4, 1896. She had a rapid pulse and high temperature, and appeared to be in a decided septic condition. Peritonitis was quite general, and alarming emaciation had taken place apparently as a result of some lung trouble. Section was made on June 5th. General adhesions were found in the region of the ileum and right groin. When all adhesions had been freed, a large, ragged perforation was found in the ileum, with circumscribed accumulation of bowel contents. The perforation was

trimmed and sutured. After an irrigation toilet, glass and gauze drainage were provided. Recovery followed. For two days following the operation the pulse remained high and feeble. The temperature also was high, and this was considered rather favorable. This patient had been very ill for two weeks before admission to the hospital. The character of the ulceration was doubtful, as there was tuberculous trouble in the lungs. The closure of the fistula after suturing is rather against tubercle, as tuberculous fistula rarely close by suture.

CASE 3.—Mrs. R. B., a married woman, aged twenty-eight, without children and without a history of miscarriages, came under observation after three weeks of illness and treatment for typhoid fever. She was admitted to the hospital on January 5, 1895, and went into collapse soon afterward, being unconscious at the time of operation. On January 6th section was undertaken, freeing all adhesions, stitching multiple bowel-fistula, detaching lymph from the bowel with gauze. There was a general angry peritonitis, with filthy bowel contents, and filthy inflammatory products throughout the peritoneal cavity. Gaseous distention was marked and the peritoneum had a decided fecal odor. Thorough irrigation and drainage were practised. I never attempted to close a filthier peritoneal cavity than this, either ante-mortem or post-mortem. Recovery followd. There were present at the operation Dr. N. Fred Essig, of Spokane, Washington; Dr. Samuel S. Q. Robinson, of the U. S. Army; Dr. Harold Bunn, of California; Dr. John F. Roeder, Dr. H. S. Lewers, and Dr. Garden, of Philadelphia.

Notwithstanding the great progress medical and surgical science has made, typhoid fever continues to present many complex and difficult questions. It must be classed among the most grave troubles with which the profession has to deal. Little is known about the disease, other than of its more objective symptoms. There is no exactitude or certainty in its treatment, which is rarely the same by any two physicians. The treatment begins with guesses and grows into some degree of certainty only as conditions improve. I will not attempt to deal with the larger circle of facts connected with typhoid fever, but will restrict my discussion to the surgical treatment of typhoid perforation.

Again, we have a wide divergence of opinion as to the propriety or wisdom of the operation. There is no very general accord of opinion as to prognosis or the definiteness and reliability of symptoms—as to reliable evidence of perforation—nor is it agreed that all these cases prove fatal.

Dr. Reginald H. Fitz, of Boston, has furnished valuable data as the result of a study of the work of the earlier investigators as to the fatality of typhoid perforation. Louis, Chomel, and Jenner have reported numerous cases of typhoid perforation, but none of recovery. Tweedle says: "Intestinal perforation is always fatal, generally within thirty-six hours." Some more recent authorities make more favorable reports, others agreeing with the earlier authorities as to the almost certain fatality.

Griesinger holds that there is a possibility of the healing of a perforation and of recovery "never in cases of general peritonitis, only when the inflammation is wholly circumscribed." The rare exceptions are

hardly worth considering in connection with the prognosis, which is to be regarded as almost fatal when the systems of perforation are distinct, and as absolutely fatal when gas is present over the liver. Murchison, who has contributed much that is valuable to the literature of the subject, says that "rare cases are met with where recovery ensues after all the symptoms of peritonitis from perforation." Dr. Reeves reports that: "I have seen in five instances all the symptoms which announce and follow perforation of the bowels, yet the patients recovered. Dr. Loomis, in discussing the subject says: "I do not remember to have seen a single recovery after there were unmistakable evidences of intestinal perforation. Recovery from a local peritonitis complicating typhoid fever is not uncommon, but when the characteristic symptoms of intestinal perforation are present, in my experience, a fatal issue soon follows." So we have the weight of authority on the side of almost certain fatality.

In the reported cases, due allowance must be made for errors of diagnosis. In many of these cases the diagnosis was not made until post-mortem examination revealed the characteristic typhoid lesions. Had recovery taken place much doubt would have remained in the mind of the operator as to the real nature of the perforation. We know that typhoid perforations are the most common variety of perforations, and the perforation is usually in the ileum.

As to the mortality in cases of the perforation of the bowel, Dr. Osler gives recent statistics: "In 114 cases of the 2,000 Munich autopsies (5.7 per cent) and in fourteen instances in my series, the intestine was perforated and death caused by peritonitis. The perforation may occur in ulcers, from which the sloughs have already separated, or it may be directly due to the extension of a necrosis through all the coats. In only a few cases is the perforation at the bottom of a clean, thin-walled ulcer. In one instance the perforation occurred two weeks after the temperature had become normal. The sloughs were, as a rule, adherent about the site of the perforation. A majority of the cases were in small, deep ulcers. There may be two or even three perforations. The orifice is usually within the last foot of the ileum. In only one of my cases was it distant eighteen inches. Peritonitis was present in every instance.

Hemorrhage from the bowels occurred in ninety-nine of the Munich cases, and in nine of my series. The bleeding seems to result directly from the separation of the sloughs. I was not able in any instance to find the bleeding vessel. In one case only a single patch had sloughed, and a firm clot was adherent to it. The bleeding may also come from the soft swollen edges of the patch. Peritonitis without perforation may also occur by extension from the ulcer, or, occasionally, by rupture of a softened mesenteric gland. It was present in 2.2 per cent. of the Munich autopsies.

The question is direct—what chances does surgery offer? The one and only chance left. We know the almost inevitable sequel in one case and something of the possibilities in the other. The one means death, the other gives a chance of recovery. The error, to put it mildly, consists in abandoning these cases as absolutely hopeless, when there is yet one last resort—surgery—which furnishes precedents of encouraging suc-

cess. I am not venturing upon entirely new ground. Dr. James C. Wilson, the honored President of this Society, a clinician of wide experience, stands among the first, if not the first, to advocate in clear, unequivocal language, surgical dealing with these cases. DR. Hunter McGuire, of Richmond, Va., a worthy supporter of the fame of the old school of surgeons, recommends the tying of vessels to control hemorrhage from ulcers in typhoid fever. He recognizes that too many are lost from this cause, and suggests an original and ingenious method of suturing to control the hemorrhage and avoid necrosis. We are slow in following the lead these men take, slow and hesitating in adopting their urgent suggestions, in coming down from our theoretic lofty height. All our surgical procedures have made their way in the face of relentless criticism and opposition. Surgical interference, in cases of typhoid perforation, has not proved an exception. Largely, the difficulty lies in timidity and over-sensitiveness as to professional repute. The protective character of adhesions are often misleading, tending to lull apprehension as to immediate existing risks to life. The condition is too frequently classified for non-interference—left to the processes of nature—when parts are weakened and poisoned beyond the kindly healing and remedial processes of nature. We find, occasionally, recorded deaths from spontaneous perforation due to chronic local peritonitis. The history may be that of localized attacks of peritonitis—with doubtful evidence of perforation—the localized attack resulting simply in adhesions about the ulcer. If the adhesions are well formed the escape of gas and bowel-contents will be limited when perforation occurs.

The patching or fortification by adhesive and protective peritonitis, avoiding acute general peritonitis and sepsis, gives us the most favorable class of cases for surgery. Localized peritonitis, with adhesions, with or without perforation, around an ulcer, with sufficient adhesive and inflammatory product to form a small tumor, is quite easily recognisable in an emaciated patient. An eminent surgeon says, in connection with these cases, that which cannot be accepted as safe dictum :

" Surgeons are not justified in performing laparotomy for the suturing of perforated typhoid ulcers, if circumscribed peritonitis of an adhesive or protective character exist, or is in process of development."

The trouble, as with all intestinal affections, is a hidden one, not one directly addressed to our vision. We cannot determine with any large degree of certainty, even from a few marked objective signs, the extent of the protected character of the adhesions, nor determine anything certain as to the character or extent of the process of development. We know the sequence in the majority of these cases where there is no interference. Perforations or fistulæ, due to ulceration and sloughing, rarely close. Almost all such ulcers are surrounded by adhesions, with pus, bowel-contents, fistulæ and fistulous openings. Complications become general, keeping the patient in a miserable condition, emaciated and anxious, with a rapid pulse, cold, clammy and greatly wasted. Fistulæ of viscera, due to incision or surgery, commonly closes spontaneously. Not so, however, when due to sloughing. Unfortunately, we are not always aided by the clinical history in our diagnosis. We are directed or guid-

ed largely by the patient's general condition, the peritonitis or the small and ill-defined tumor.

There is but little difficulty in settling the fact that the patient is dying of some intra-peritoneal lesion. Errors are rarely made in opening the abdomen. Suture methods for repair, after careful trimming of the ulceration, give the most pleasing results. Excisions or resections have nothing to recommend them. The open treatment, when the conditions are desperate, and sepsis and bowel distention very marked, favors peritoneal and bowel drainage of all contents. An abundance of gauze placed about the fistula in the shape of a square coffer-dam favors simple drainage and avoids contamination. The large mortality has been largely due to clumsy and imperfect work. Everything within the abdomen is intolerant of bungling manipulation. The surgery is not to be gone at with that awkwardness with which a man would try to put his five fingers in a glove with four. The delicacy of the condition of the parts, which the very nature of the disease creates, requires in the surgery the use of fingers delicate and sensitive of touch and deft in use. The repair of perforations, commonly single, rarely multiple, is easy and should be rapid. There may be some delay in the seeking and finding the point of perforation, but the well-defined nature of the pathologic condition at that point is easily recognized by fingers familiar with normal intra-peritoneal conditions. The deviation from the normal can be instantly recognized when the fingers are passed through the viscera without exposure. The cluster of adhesions, omentum and bowel, about the perforation, are easily freed. The cleansing, local and general toilet are of great importance. Rarely do we find distention associated with perforations, except in the delayed cases, on the third or fourth day after perforation.

In delayed cases the mass is well marked; paresis of the bowel with over-distention is prominent. The characteristic fecal odor is recognizat once upon opening the abdomen. This is most marked in the acute cases in those dying soon after perforation. If the adhesions are well formed about the perforation, a fecal odor is rarely present. When patients are under observation, the diagnosis made early, the disease running a uniform course with a definite train of symptoms, the characteristic morning remissions and evening exacerbations, and about the third week a copious intestinal hemorrhage takes place, with the patient sinking into fatal collapse, with a quick pulse, sub-normal temperature, the symptoms admit of but one interpretation, and point to but one possible source of relief.

In the very nature of things, from the very character of the trouble and the parts attacked, the mortality will always be large, but some can be saved. The stimulus of anesthesia increases the force of the pulse, the patient's respirations deepen, and at the completion of many of these operations, the patient's general condition is often better than before the operation. An irrigation toilet, aside from having great value for cleansing, is a stimulant to the solar-plexus and favors reaction.

The same principles apply in these cases of typhoid perforating ulcers that apply in cases of general septic or purulent peritonitis and to stab

wounds and gun-shot wounds. The words of Dr. D. Hayes Agnew, who, in his day, was the sovereign spirit of American surgery as applied by him to gun-shot wounds of the abdomen, applies with equal appropriateness to typhoid perforations.

He says: "I want to place myself upon record, for I have very strong convictions with regard to laparotomy. They amount to this: If there is a reasonable degree of evidence that there is a penetrating abdominal wound, especially if a shot-wound, it is our duty to open the abdomen, to make an exploratory incision. We are not to be deterred by the possibility of some legal technicality, if the case should come into court. We are to do our duty without reference to consequences."

I will quote extensively from Dr. J. C. Wilson, for nothing better has been said upon the subject:

"I take it for granted that almost every case of free extravasation of intestinal contents, however small in amount, into the peritoneal cavity terminates fatally. There is little reason to believe that any case of this kind recovers. It is important to note that the cases of peritonitis in enteric fever in which recovery is possible can be chemically distinguished from those which will terminate rapidly in death. The clinical picture of the two conditions is almost as distinct as are the pathological lesions. Where there is extravasation of the intestinal contents into the peritoneal cavity, the collapse is like that caused by the escape of an amount of foreign matter, the result of a perforating gun-shot wound of the intestine. The proposition which I submit for discussion arises directly from a consideration of the matter in this way. Until within a few years no surgeon realized the possibility of treating cases of gun-shot injury of the abdomen with perforation of the intestine and the escape of blood and fecal matter by the operation of laparotomy, washing out the peritoneal cavity, excising bruised and lacerated portions of the intestine, and bringing the parts together by suture. Yet this is now the recognized procedure in such cases, and has been of late practised in many instances with success in cases that, under the old plan of opium and expectancy, would have inevitably perished.

"Are we ready to adopt the same measures in perforation of the intestine with similar conditions as regards the peritoneal cavity, and a like helplessness as regards cure by opium and expectancy in our cases of enteric fever? Recognizing the two groups of cases I have described, and being, as we are, able to refer almost all cases to either one or the other of them within a few hours of the development of the symptoms, are we prepared to decide—and to do so with the necessary promptness—upon those operative procedures by which alone in the second group the life of the patient may be saved?

"Granted that the chances of a successful issue are heavily against you; that the patient is in the midst or at the end of a long sickness; that his tissues are in the worst state to stand the injuries of the surgeon's knife; that the lesions of the gut may be very extensive; that the vital forces are at the lowest ebb. No one yet has hesitated to perform tracheotomy in the laryngeal complications of enteric fever, which require it to save life, for these reasons."

The operative treatment of purulent peritonitis has been performed many times successfully by the gynecologist in conditions scarcely less unpromising. In point of fact, the objections that may be urged against laparotomy in intestinal perforation in enteric fever are no more forcible than those which would have been made use of at first against the same operation in gun-shot wounds of the abdomen. The courage to perform it will come of the knowledge that the only alternative is the patient's death. Dr. Wilson, with his advanced, pioneer views in this connection, does not furnish the first illustration of the physician taking the lead of the surgeon, furnishing the guiding, the impelling thought, not infrequently the courage.

About seven years ago the American Surgical Association and the Association of American Physicians discussed, at the same time and in the same building, the relative merits of surgical and non-surgical interference in appendicitis, the medical body deciding in favor of prompt operative interference, the surgeons for delay. Almost coincident with Dr. Wilson's advocacy of celiotomy for the relief of intestinal perforation in typhoid fever, Dr. Lewis S. McMurtry, of Louisville, Ky., performed an operation, the subject being a physician, and found multiple perforations. He trimmed the holes, closed them with sutures, irrigated and drained, recovery following. A report of this case, with the patient present at the time, was made at the Cincinnati meeting of the American Medical Association.

There is another record case—that of McArdle, of Dublin. The history is one of abscess and multiple perforations following an accident, occasioned by jumping from a waggon.

The accident is not a very satisfactory explanation of the trouble in this case. The evidence better supports the conclusion that the case was one of walking typhoid fever with multiple perforations. I might refer to cases in my own experience, and that of others, in which the history was doubtful. A considerable number of operations for circumscribed abscess have been reported as successful. Many of these cases are quite as questionable in their history as are those for which post-mortem operation has been done or refused.

In this connection Fitz says:

"Although the reported instances of the successful results of an operation for the cure of circumscribed peritonitis in typhoid fever are comparatively few, I have been able to collect a considerable number in which recovery resulted from resolution or from the spontaneous evacuation of the inflammatory product. In seventeen cases of recovery by resolution the peritonitic attack began in the second week in one, in the third week in eight, in the fourth week in one, in the fifth week in one, and in the sixth week in two. It began at the end of the fever in one, and during convalescence in three. Recovery took place in a week in one, in two weeks in three, in three weeks in two, in four weeks in one, and in two or three months in three. The length of time necessary for recovery in the remaining cases was not stated."

It is a mistake, on the part of gynecologists and obstetricians, to apply the term typhoid fever to certain septic conditions. The sponge-

tent, the curett, the sound and a variety of minor gynecologic operations have been followed by septic conditions and abscesses, frequent pulse, high temperature and diarrhœa—simulating typhoid fever.

Obstetricians are in the habit of reporting septic cases under the head of malaria. The recorded mortality is largely from the prolonged anæsthesia of a patient already enfeebled and with a greatly weakened heart, and the great length of time taken in the operations. They will not stand prolonged anæsthesia or a prolonged operation. In a large percentage of those dying after long anæsthesia and operation, death is due to causes within the surgeon's control.

One of the common causes complained of is that of weak, unhealthy tissue, and the yielding of sutures. Herein lie two errors—the choice of needle and that of suture-material. The best needle is that from the woman's sewing case—a fine, round needle, and 0 or 00 Chinese silk.

Early diagnosis, early operation, painstaking, rapid work will save many lives.

Courage goes hand in hand with reverence for human life. There is much force in what Napoleon said to Las Casas: "As to moral courage, I have rarely met with two-o'clock-in-the-morning kind. I mean unprepared courage, that which is necessary on an unexpected occasion, and which, in spite of the most unforeseen events, leaves full freedom of judgment and decision." It is two-o'clock-in-the-morning courage we need—the factor that goes largely to settle the result in many surgical cases for us is the last quarter-of-an-hour.

---

VENEREAL BUBOES.—Dr. J. C. Perry (*Am. Jour. of the Medic. Sciences*) has employed the treatment described by Dr. Hayden in seven cases with extremely satisfactory results. This method consists in making a small puncture of the skin at the most fluctuating point of the bubo; thorough evacuation of the pus; irrigation of the cavity with peroxide of hydrogen followed by bichloride solution 1:1000; removal of all fluid by compression, and distension of the cavity with warm vaseline holding in suspension 10 per cent. iodoform; and application of a cold bichloride dressing to favor congealment. Of Dr. Perry's patients five were cured by one injection, the average time of treatment being thirteen and one-half days. On the ground of his experience he concludes:

1. That buboes are probably caused by the absorption of chemical poisons, the result of the action of the micro-organisms in the chancroid, and not to the entrance of the micro-organisms themselves into the lymphatics.

2. That the benzoate of mercury yields such satisfactory results that it should be employed in the treatment of non-suppurating buboes, and excision reserved for those cases in which benzoate has failed.

3. The injection of iodoform-ointment should be used in the treatment of all freely suppurating buboes, since statistics show that it yields much more satisfactory results than the other methods of treatment applicable to this variety.

4. Incision and curettement should be used in a few cases in which the

skin has been destroyed and the ulcer presents an unhealthy granulating surface.

5. Excision should be reserved for cases that have not yielded to other treatment, and for those in which there are several foci of suppuration.

---

THE INCISION IN APPENDICITIS.—Dr. J. S. Wight (*N. Y. Med. Jour.*) states that the hypogastric incision is made nearly parallel with Poupart's ligament. It is slightly curved, having the convexity downward and outward. Draw a line from the umbilicus to the superior anterior spine of the ilium, and divide it into three equal parts. The hypogastric incision is made near the junction of the outer and middle thirds of this line. The location of the incision may vary according to circumstances. The incision may be made quite near the spine of the ilium. It usually begins a little above the line drawn from the umbilicus to the spine of the ilium, or it may be made wholly below this line. At the outset the incision may be about two inches in length, and subsequently it may be extended in either direction if necessary.

---

## SURGICAL ITEMS.

The new woman is especially imperilled. She used to have to watch the hymen; now she must look out for the appendix, the adnexæ and the mobility of her kidney with as much care as if they were her cardinal virtues.—C. L. DANA.

---

For acute localized prostatitis, Dr. Guepin *(Jour. d. Pract., N.Y. Med. Jour.)* employs the following:

℞

Iodoform,
Extract of hyoscyamus, } of each.....½ grain.
Cacao butter.....45 grains

M.

---

Another vagary, I take it to be, is the frequency with which prolapse of the rectum is supposed to exist. In my experience, extending over eighteen years, I have had but six cases of prolapse of the rectum in the adult. I have had several hundred cases of prolapse—so diagnosticated. It is true that a great many physicians call large protuding hemorrhoids prolapse of the gut. This is a mistake. When I say that I have only seen six cases, I mean in the adult. Young children often have prolapse of the gut which will take care of itself under simple treatment.—MATTHEWS.

---

Dr. de Bovis (*Gaz. des Hop.*, June 20th) discusses the indications for surgical treatment in non-traumatic affections of the pleura. He considers asphyxia as an urgent indication. Purulent or gangrenous processes in the pleura also demand this operation, which should be resorted to at

an early time in the latter cases. In tuberculous subjects it should be delayed so as to favor formation of adhesions; the presence of a more or less marked pyæmic state will determine the degree of urgency of surgical interference. As a rule the results are good. The resulting thoracic fistulæ are drained, if the general health permits.

---

The only conclusion at which one can arrive after a study of all the symptoms of chronic abscess of the brain, is that the diagnosis is often a a most difficult one, and sometimes is an object of impossible attainment. The nearest approach to accuracy in diagnosis in obscure cases, is to arrive at a conclusion which amounts to a problematic diagnosis between two or more morbid processes. To recommend an operation for the relief of chronic abscess of the brain only in those cases in which the diagnosis is certain, is to sacrifice many lives that might otherwise be saved by judicious boldness. The physician who has not the courage to recommend an exploratory operation in a strongly probable case of abscess of the brain, lest he may be wrong in his diagnosis, is more solicitous for his own reputation than for the welfare of his patient.—ESKRIDGE.

---

NEVUS OF THE FACE.—Dr. Abbe (*Med. News*) says that the best treatment consists in the use of an ordinary large cambric needle or a hat-pin, heated to a red heat, and then plunged into the tissues of the nevus *at a black heat.* The insertion of the needle at a black heat has much to do with securing a good result. Punctures should be made in this way all over the tumor. There is no bleeding whatever, and the case is usually cured in three or four operations.

---

POSTURAL TREATMENT OF SEA-SICKNESS.—Rawlins, an English physician, says that the elevation of the extremities will quickly relieve the symptoms of sea-sickness by increasing the arterial pressure, and thus diminish the anemia of the nervous centres due to the enfeebled action of the heart. The application of warm flannel bandages to the legs and arms will increase the effect produced by the simple elevation. In this way he was able to make two ladies comfortable during a journey to India, who had previously suffered seriously from severe sea-sickness.

---

PALPITATION OF THE HEART.—The various diseases that are accompanied by palpitation, incipient acute aortitis, acute endocarditis, acute pericarditis, adhesions of the pericardium, and mitral stenosis or insufficiency, are benefited by digitalis or its substitutes. I give the following formula:

℞ Quinine hydrobromide, 1 drachm.
Powdered digitalis, 30 grains.
Extract convallaria, 30 grains.

Divide into forty pills; two to four to be taken daily.—HUCHARD, in *Archives de Médicine et de Pharmacie Militaires.*

# MEDICINE.

IN CHARGE OF

N. A. POWELL, M.D.,

Professor of Medical Jurisprudence and Lecturer on Clinical Surgery, Trinity Medical College; Surgeon to the Hospital for Sick Children, and to the Extern Department Toronto General Hospital; Professor of Surgery, Ontario Medical College for Women. 167 College St.; and

WILLIAM BRITTON, M.D., 17 Isabella Street.

## THE EARLY DIAGNOSIS OF CANCER OF THE STOMACH.

BY CHAS. D. AARON, M.D., DETROIT.

If our treatment of cancer of the stomach shows poor results, it is due to the fact that the medical practitioner usually does not make his diagnosis early enough, and when the surgeon is called, he finds a disseminated mass instead of a circumscribed tumor to be extirpated. When we take into consideration that .5 to 2.5 per cent. of all deaths and 35 to 45 per cent. of all cancers are of the stomach, it is time that more attention be paid to an early diagnosis. It is because the average physician neglects a more detailed examination and resorts to bismuth and pepsin, that cancer of the stomach has been allowed to attain such development as makes an operation practically useless. What, years ago, Brinton said of cancer of the stomach, is still true to-day. He said, it is obscure in its symptoms, frequent in recurrence and fatal in its course. In spite of the progress made in the diagnosis of stomach diseases, the therapy of cancer of the stomach remains the same, namely, early extirpation. But when a large tumor can already be felt in the epigastrium, it is usually too late to operate, since then the surrounding tissues are involved by metastasis.

It is the intention of this paper to show how beneficial it would be, in the majority of instances, if a diagnosis were made before a tumor is palpable. We are told of recoveries after operations on cancerous patients, when the tumor was already palpable, but these cases are extremely rare. It is possible that the diagnosis was made early by one who was able to locate the new formation. But can we make a diagnosis on the basis of the general course of the disease, even if the presence of a tumor has not been established? Boas tells us that strong Uffelmann's reaction after a test breakfast points out the probability of cancer of the stomach. Heretofore it was believed that when we had a case of chronic gastritis, with absence of hydrochloric acid, either lactic, butyric or acetic acid fermentation takes place. This has been proven not to be true. While we were formerly able to demonstrate that lactic acid is present in cancer of the stomach, this circumstance was not given sufficient weight until Boas drew our attention more particularly to it. Boas says that in cancer of the stomach Uffelmann's test gives us a greenish-yellow reaction, due to the presence of lactic acid, and that the little quan-

tity of lactic acid which results from other causes does not react in the same way. Ewald tells us that the advantage of Uffelmann's test is its extreme sensibility to lactic acid found in carcinomatous patients, but in the differential diagnosis the abundance of lactic acid should always be taken into consideration.

To get an intense lactic acid reaction, it is necessary that there is a stagnation of the stomach contents, and that hydrochloric acid is absent. If only one of these conditions is fulfilled, as in chronic gastritis or dilatation, we cannot get this reaction. I concede that in rare instances we have a formation of small quantities of lactic acid, but it occurs in small quantity only, and it does not give the characteristic reaction, as lactic acid does in carcinoma of the stomach. Whether we have a specific lactic acid or not in cancer of the stomach, I will not discuss here.

When the stomach contents show the absence of hydrochloric acid and the persistent presence of lactic acid, we are able to make a diagnosis by differentiation. There can be a choice of but one of three diseases, nervous anacidity, chronic gastritis or malignant new formation. We can always exclude nervous anacidity and chronic gastritis, on account of the persistent presence of lactic acid, which always indicates carcinoma of the stomach. It is necessary to look for a stagnation of the contents of the stomach. The patient may have vomited food which had been taken a day or two before, or we can estimate the amount of the stagnation by washing out the stomach. In chronic gastritis we never have a stagnation; there is usually a prompt forwarding of food into the intestine. In fact, in many cases of chronic gastritis, the motor function of the stomach is heightened, as I have often seen.

It is unnecessary to wait for the cachexia, edema of the joints, enlargement of the glands, fissured tongue, emaciation, obstinate coffee-ground vomit, insomnia, vertigo and the palpation of a tumor to make a diagnosis of cancer of the stomach. No surgeon can give us a good result after these symptoms have already appeared. It must not be forgotten that, in a number of cases, the liver prevents us from palpating a growth of pylorus until it is quite large. It is frequently found that the fenestra of the stomach tube is filled with small particles of clotted blood. Professor Ewald regards this as an indication of carcinoma, even though a tumor is not yet palpable. These particles should always be examined microscopically, and if cancer cells are present, our diagnosis is verified, but if absent, we can only suspect it. A diagnosis of cancer of the stomach can usually be made several months before the tumor becomes palpable.

The following points may be looked for: 1, a stubborn case of stomach disorder appears in a person (say between 35 and 60) who was formerly in good health; 2, loss of weight and flesh; 3, vomiting occurs often; 4, a test breakfast proves that free hydrochloric acid is absent; 5, there is a stagnation of the stomach contents; 6, lactic acid is shown to be present in abundance; 7, a microscopic examination shows that long thread bacilli are present. Cases are repeatedly reported abroad in which, after a diagnosis of cancer made by the above symptoms, exsection of the pylorus was performed and the cure of the patient achieved.

It seems to me we are now able to make an early diagnosis of cancer of the stomach, before metastasis has taken place, by means of a thorough examination after a test breakfast.

I do not mean to imply that by means of the seven data I have enumerated every cancer of the stomach can be easily recognized, but they indicate a considerable step forward in an early diagnosis, and thus open up for the surgeon opportunities which were closed to him till now.

For the examination for the presence of lactic acid, Uffelmann says that diluted solutions of neutral ferric chlorid turn canary yellow in presence of lactic acid. Should this reaction give no positive results I would advise Kelling's modification. This consists in diluting the filtrate of the gastric contents from the tenth to the twentieth fold; to this one or two drops of a 5 per cent. ferric chlorid solution is added, and a greenish yellow discoloration takes place. This proves the presence of lactic acid. In order to avoid the obscuration of this greenish color through the rhodan, which originates from the saliva, Keeling adds a few drops of a sublimate solution. The procedure as recommended by Strauss can also be applied. This consists in filling a burette, graduated at 5 and 25 c.c. respectively. We fill the burette up to 5 c.c. with the stomach filtrate, and add sulphuric ether up to the mark 25; this is well shaken, and through a stop-cock at the bottom the burette is emptied to 5 c.c. and filled to 25 c.c. again with distilled water. To this are added two drops of a ferric chlorid solution (one to nine) and the whole is shaken. According to Strauss, if lactic acid up to 1 per cent. is present, an intense green appears, and if the percentage is lower a pale green is noticeable

For exact scientific data, the method of Boas is valuable. It aims at a decomposition of the lactic acid into acetaldehyde and formic acid, by adding some oxidizing agent and by the aid of heat.

$$\underset{\text{Lactic acid.}}{CH_3CH(OH)COOH} = \underset{\text{Acetaldehyde.}}{CH_3CHO} + \underset{\text{Formic acid.}}{CHOOH}.$$

The presence of lactic acid is proven by the existence of the aldehyde through the formation of iodoform, with an alkalin iodin solution, or through the formation of mercuric aldehyde with Nessler's reagent.

In former years the results attained by exsection of the pylorus were far from satisfactory. This was due to the fact that it had been resorted to too late in the stage of the disease, when complications had arisen and the patient had been reduced in vitality, and metastasis had taken place. Later statistics, however, are more favorable, and show what can be accomplished when a diagnosis has been made early. Haberkant performed 207 exsections of the pylorus, of which 114 were due to carcinoma; he had 93 recoveries and a mortality from pylorectomy in the carcinoma cases of 55.8 per cent. Hahn, in 1891, had a mortality of 77 to 41 per cent. Zeller, in 1893, a mortality of 61 to 34 per cent. But the most gratifying results Mikulicz reports in 1895. Out of eighteen pylorus exsections he lost only five cases. These statistics are in themselves a proof of the possibilities of success of pylorectomy, on condition of an early diagnosis. I cannot warn too earnestly against the habit which physicians have, of waiting for the appearance of a palpable

tumor, before they advise surgical procedure. Czerny and Rindfleish have as far back as 1892 emphatically declared that, in the majority of cases when we make a diagnosis of cancer of the pylorus by the palpation of a tumor, no radical operation should be made.—*Jour. Am Med. Assoc.*

## THE TREATMENT OF CEREBRAL HEMORRHAGE.

In *Treatment*, for July 8, Dr. Byrom Bramwell has an article on this subject, of which the following is the substance.

"At the beginning of an attack of cerebral hemorrhage, says the author, the first indication for treatment is to try to arrest the bleeding and limit the extravasation, and this is done by lessening the activity of the cerebral circulation. The head and shoulders should be raised rather than lowered. An ice-bag should be applied to the head and warmth to the feet. Leeches may be applied behind the ear, and a drop or two of croton oil administered. Venesection, bleeding from the temporal artery, compression of the common carotid artery, and ligaturing the carotid artery on the side of the hemorrhage are, he says, other methods which have been recommended.

"Bleeding, Dr. Bramwell believes, is useful and especially indicated in those cases in which the face, head and neck are turgid, the pulse is hard, full and slow, and the left ventricle is hypertrophied. It is contra-indicated, however, in cases in which the pulse is feeble, rapid or irregular, the heart dilated or weak, and the patient very old or debilitated.

"A brisk, watery purge acts, he says, in very much the same way as a moderate bleeding, but for the production of such a purge time is required; consequently, in many cases, venesection is preferable. In cases in which the advisability of bleeding is doubtful, a drop or two of croton oil and an enema may be administered. The practice of applying a blister to the nape of the neck is, Dr. Bramwell thinks, of doubtful advantage. In several cases, he says, it is useless, and in slight cases in which coma is speedily recovered from it is unnecessary. If a blister is to be applied at all, it is probably best applied to the shaved scalp between the ears over the top of the head. The ice-bag may be applied over the top of the blister.

"Internal remedies Dr. Bramwell considers doubtful, as they have not much influence in arresting the bleeding, although nitrate of amyl, or nitrate of sodium, is perhaps useful in some cases in which the pulse is hard and tense; venesection, however, he considers a better remedy.

"If coma becomes deeper and deeper, the pulse slower and slower, and the respiration more and more affected, and intracranial pressure is evidently steadily increasing as the result of gradually increasing hemorrhage, the advisability of trephining and tapping the hemorrhagic cavity, and so preventing rupture into the lateral ventricles—an event which is certainly and rapidly fatal—should be considered. Such cases are comparatively rarely met with.

"The second indication, continues the author, is to attend to the condition of the bladder, and to take means to prevent, if possible, the forma-

tion of a bed-sore. The patient should be placed at once, or as soon as he can be moved without risk, upon a water-bed. Care must be taken, too, that the hot bottles which are applied to the feet are not too hot. Owing to the comatose, or semi-comatose condition, the patient will not, of course, make any complaint (the nurse has, under such circumstances, to feel for him), and, owing to the diminished trophic resistance of the skin, a degree of heat which would not be prejudicial to a healthy person may easily blister and burn the skin of a patient suffering from cerebral hemorrhage. If there is retention of urine, the bladder should be emptied by the catheter at regular intervals; if there is incontinence, the patient should be kept dry and clean. This is a most important point, says Dr. Bramwell, for the development of a bed-sore is one of the chief dangers in cases which do not immediately prove fatal.

"The third indication is to sustain the vital powers by appropriate feeding and, if necessary, by the administration of cardiac tonics and stimulants. It is important to avoid giving anything which is likely to produce vomiting, for the straining which attends the act of vomiting may reopen the ruptured vessel, or, if the bleeding is still going on, increase it. For the same reason stimulants should be withheld, unless they are absolutely required. If the heart is failing and the pulse rapidly running down, stimulants must, of course, be administered, even at the risk of increasing or re-exciting the hemorrhage.

"During the comatose state, Dr. Bramwell continues, the administration of food and liquids by the mouth requires to be conducted with great care and caution.

"A nutrient enema may be given every four hours, and, if necessary, it may be supplemented every now and again by a nutriment suppository. During the stage of coma, mucus, saliva, etc., are apt to accumulate in the mouth and pharynx, and add to the difficulty of the respiration and the tendency to death from asphyxia; for it must be remembered that in some cases the patient dies during the stage of coma from failure of the heart's action, in others from asphyxia and failure of the respiration, in others from the two conditions combined. In others again, death is preceded or attended by hyperpyrexia.

"By attention to posture (turning the patient on his side, turning the head to one side, etc.), it is in many cases possible to avoid the accumulation of mucus, etc., at the back of the throat, and so to diminish the risk of asphyxia. The relief is, however, in most cases merely temporary. In cases of cerebral hemorrhage in which the conditions are developed, the result is almost always fatal. It is very different when we are dealing with the status epilepticus. In that condition, Dr. Bramwell says, he has undoubtedly, in more than one case, by preventing the accumulation of mucus, saliva, etc., in the back of the throat, and so preventing asphyxia, saved the life of the patient.

"Provided the patient can swallow, a teaspoonful or two of milk may from time to time be given by the mouth, but once the bowels have been thoroughly well opened it is better to feed the patient by the rectum. If there is difficulty in swallowing, if the administration of fluids by the mouth produces coughing or choking, the feeding should be entirely

rectal. Alcoholic stimulants, digitalis, etc, may be given by the same channel, or strychnine (a drop or two of the liquor every two hours) may be administered hypodermically, the effect being, of course, carefully watched.

"Possibly in some cases in which the respiration is much embarrassed and death from asphyxia seems imminent, oxygen inhalations might be beneficial.

"The main objects of treatment during the first stage of cerebral hemorrhage are to arrest the bleeding and to tide the patient through the stage of coma.

"The fourth indication, continues the author, is to prevent and allay the secondary cerebral inflammation.

"When symptoms indicative of this (a rise in temperature, headache, muscular twitchings, rambling, a return of the coma, etc.,) develop a brisk purge may be again administered, cold (an ice-bag) reapplied to the head, and bromide of potassium and chloral hydrate given in addition to the iodide.

"If, during the stage of secondary cerebral inflammation, the pulse becomes very quick, feeble, or intermittent, cardiac stimulants—digitalis, strophanthus, strychnine, etc., must be given; alcohol is probably better avoided. If the pulse tension is high, the administration of remedies which depress the force and violence of the heart's action, such as aconite or nitrate of sodium, may perhaps be employed with advantage in some cases in addition to purgation.

"As the symptoms of this secondary inflammation subside the use of bromide of potassium and chloral hydrate should be discontinued.

"After the symptoms indicative of this secondary inflammation pass off, complete rest must still be enjoyed until the acute changes round the clot have subsided. The use of iodide of potassium, with perhaps a small dose of carbonate of ammonium or tincture of nux vomica, should be continued. During this, the early stage of convalescence, the patient must be carefully fed, the condition of the bladder and rectum attended to, and any cystitis or bed-sores which may have developed treated. At this stage of the case gentle massage is useful. Faradaism of the paralyzed muscles, strychnine, and too active attempts at voluntary movement of the paralyzed parts, all of which may be most useful a little later, should be avoided, or, if employed, administered with great caution.

"Some authorities, Dr. Branwell continues, recommend the application of the constant electric current to the head—one pole being placed just above either mastoid process. The constant current, by its atalytic action, is supposed to aid the absorption of inflammatory products, and to promote the nutrition and restoration of the damaged nerve elements. It is very doubtful, he thinks, if electricity applied in this way is any real use. If it is employed the greatest care should be taken to use a weak current, and the effects which the current produces on the patient should be carefully watched.

"In severe cases of hemiplegia the tendency to the development of contractures should be remembered, and passive movements (more

especially of the fingers, wrist and elbows, for it is at these parts that the contractures are most apt to be developed) carefully and diligently practised.

"When there is reason to suppose that the acute changes have subsided —*i.e.*, at the end of six weeks or two months—the treatment appropriate for an ordinary case of chronic hemiplegia may be employed. A more liberal dietary may be allowed; the patient should be encouraged to practice systematic voluntary movements; general tonics, such as quinine and small doses of strychnine, may be given internally, and massage and electricity judiciously and cautiously applied to the paralyzed muscles.

"The treatment (amount of exercise, etc.) must, of course, Dr. Branwell adds, be carefully and judiciously regulated in accordance with the conditions which are present in each individual patient (the severity of the paralysis, etc.), the state of his heart, arteries, kidneys, etc., being taken into account.

"Concerning the prevention of subsequent attacks, Dr. Branwell thinks that much can be done to prevent and defer a second rupture. All exciting causes should be avoided; it is especially necessary to reduce the blood pressure when the pulse tension is excessive, such as sudden efforts, mental excitement, sudden exposure to cold, straining at stool, etc. A patient who has had an attack of cerebral hemorrhage, however slight, should lead a quiet, routine life, and if his business entails much bodily exertion, mental strain or excitement, he should be advised to give it up. In some cases, however, it is usually preferable to allow the patient to continue his work in a modified way rather than to worry in his idleness. The risks entailed by the work and the risks entailed by the idleness and the want of occupation have to be weighed one against the other.

"The diet should be light and nutritious; if the patient is gouty, if his kidneys are cirrhotic, if his blood pressure is high, a non-nitrogenous diet is best. In these cases, says Dr. Branwell, alcohol should be prohibited; a certain amount of tobacco, however, may be allowed. A certain amount of gentle exercise is beneficial, but sudden exertions, running for trains, etc., should be rigidly avoided."—*N. Y. Medical Journal.*

---

## BELLEVUE HOSPITAL AND ITS TREATMENT OF ALCOHOLICS.

It has long been known that about one-half of the patients admitted to the insane pavilion of Bellevue were alcoholics. Before a satisfactory diagnosis could be made as to the mental condition, it was therefore necessary to sober up these patients. For the past few years a systematic effort has been made by Dr. Austin Flint, who was on duty in the insane pavilion, to formulate some treatment that should be more far-reaching than the long-established use of bromides and other sedatives. Strychnine has become the drug par excellence for these cases, and its effect is so striking and so decided in cases of alcoholism that it has come to be regarded as a specific antidote to alcohol-poison. Its immediate effects, when given hypodermically, are most satisfactory and surprising. In the form and dose in which it is now administered it will clear up nearly

every case of alcoholism in from twenty-four to forty-eight hours. The formula used by Dr. Flint is as follows:

Nit. Strych.....grs. viii
Acid Salicylic.....grs. iv
Alcohol.....oz. i
Water.....oz. iii

Make up antiseptically.
M xv—1-16 of a grain of Strych.
Sig. M. 15 hypo. two or three times daily.

In the alcoholic wards proper Dr. Charles L. Dana has instituted similar investigations and has reached conclusions very similar to those of Dr. Flint In addition to the use of strychnine, however, Dr. Dana endeavors to throw about the secondary treatment of these cases the strong mental suggestion of a cure. His custom is to select, for the cure treatment, from the convalescents of an acute attack of alcoholism only those persons who have reasonable intelligence and show real evidence of sincerity in their desire to reform.—*Columbus Med. Jour.*

---

DEATHLESS MIDWIFERY.—The statistics of the Stockholm Hospital show 4,000 cases of childbirth and 4,000 complete recoveries.

---

**THE DOCTOR.**

Oh doctor, in our hours of ease,
We scorn your counsel as we please;
When peach and watermelon green
The bosom wring with anguish keen;
When in the night the hoarse "ka-whoop"
Rouses the house with fear of croup;
When midst the storm that rends the skies
"Newralagy" tackles grandma's eyes;
When roaring thunder-clouds low hung
Retard the play of ma's left lung;
When wintry drifts the roads impede
And baby's nose begins to bleed;
When hub-deep mud clogs all the way,
And Tommy's earache comes to stay;
Whene'er the least of human ills
Clamors for poultices or pills,
Come right away—no matter how—
A ministering angel thou.
All aches and pains are cured by you,
Save pa's tick dollar-I-owe-you.

—BOB BURDETTE.

---

ORCHITIS.—Use an ointment composed of one part guaiacol to six of vaselin. It is an excellent application.—*Exchange.*

---

ACNE ROSACEA.—A French physician reports two obstinate cases of this disease quickly cured by the local application of oil of turpentine.—*Medical Standard.*

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF
CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

EPILEPSY AND AUTO-INTOXICATION.—Dr. C. Agostini has followed up the researches of Voisin and Mirto, who have shown (*Journal of Medical Science*, July, 1897,) that the urine of epileptics possesses a special toxicity (and those of a number of other observers have demonstrated that true epileptic fits can be produced as the result of auto-intoxication by abnormal products developed in the gastro-intestinal canal) and has made an investigation into the composition and toxicity of the gastric fluid and urine in epileptical insanity at various periods in relation to fits. He finds that in the intervals between the fits the gastric juice is in most cases normal as far as can be recognized by mere chemical analysis with, however, a tendency to hyperacidity and especially excess of hydrochloric acid. For a short time previous to a fit, and for some time afterward, there are changes indicating a condition of transitory dyspepsia. An epileptic convulsion in proportion to its duration and intensity greatly disturbs the whole digestive functions of the stomach, increasing the secretion of hydrochloric acid and mucus, favoring the development of abnormal fermentation products leading to the appearance of biliary acids, lowering the peptic action, and diminishing the sensibility, motility and absorbing power of the organ. In the intervals between the fits, the toxicity of the gastric juice (tested upon rabbits) is not necessarily greater than in healthy individuals, provided the patient is not suffering from chronic gastric catarrh. In the prodromal period in relation to a convulsive seizure, and especially in those cases in which there is chronic gastric catarrh, the stomach wash displays energetic and constant toxic properties. After a convulsion this toxicity is still further increased. Attacks of petit mal increase the gastro-toxic power in a similar manner. The toxic principles appear to be of the nature of leucomaines, and are probably the same as those that are found in the gastric fluid of dyspeptics in general. Examination of the urine shows that in the intervals between the fits, the tissue metabolism of epileptics is below normal, as evidenced by the elimination of azotised substances (urea, uric acid and creatinin) phosphoric acid and chlorides. The excretion of azotised products is further diminished in the prodromal period. After a violent motor fit there is an increase in the density and acidity of the urine and in the elimination of all the ordinary products of tissue change except chlorides. None of the abnormal constituents of the urine that may appear after a fit do so regularly or constantly. The urine of epileptics has always a greater toxicity than that of the normal individual. This tox-

icity is increased in that period immediately preceding a fit. After a convulsion the urine is hyper-toxic and remains so for more than twenty-four hours. The toxicity is always proportionate to the gravity of the gastro-intestinal disturbance associated with the fits. It is probably the products that have the general reaction of leucomaines. The administration of bromides distinctly diminishes the toxicity of the urine.

Agostini maintains that in a large proportion of epileptics the fits are preceded by marked symptoms of gastric catarrh. In the intervals between the fits the catarrh in most cases disappears, but in many it persists, becoming aggravated about the time of the fits. In those patients who have chronic gastric catarrh the epileptic phenomena are more frequent and more severe. He believes that this chronic or transitory gastric catarrh is accompanied by putrefactive changes in the contents of the stomach and intestines, and the formation of toxic substances which become absorbed, and tend to accumulate in the blood, giving rise to the malaise, headache and furring of the tongue which precedes the occurrence of a fit, and finally determining the convulsion or series of convulsions. He has found that all measures tending to the elimination of such toxic products, or to the prevention of their formation, diminish the frequency of the fits or altogether prevent them. He further believes that the process of oxidation is usually deficient in epileptics. Hence leucomaines absorbed from the intestinal canal are not completely oxidised, as in healthy persons. He also thinks it is probable that in epileptics, on account of the morbid functioning of the nervous system, excretory processes take place with abnormal slowness, so that there is a tendency to the retention in the system of products of reduction that ought to be eliminated. He fully recognizes that idiopathic epilepsy is essentially a cerebral disease and would look upon it as the result of a "polymorphic degenerate state," the most constant and most pathognomonic feature of which is the existence of "somatic and functional asymmetry." He rejects the view of Chaslin and others, according to which epilepsy is due to a special brain schlerosis. But while admitting the existence of a cerebral abnormality that predisposes to epilepsy and often actually determines it, he contends that it is logically and experimentally proved that in many cases the determining cause of the repetition of the fits is auto-intoxication. The irritation occasioned by the toxic agents produces either hyper-excitability of the psycho-motor centres or exhaustion of their inhibitory power, permitting the tumultuous action of the lower automatic centres. These toxic agents need not have epileptigenetic properties. They act simply by increasing the vulnerability of the imperfect and unstable nervous system of the epileptic.

Since auto-intoxication plays so important a part in the production of epileptic fits, Agostini advocates the endeavor as far as possible to remove the factors of such intoxication. In the first place, correct gastro-intestinal catarrh when it is present, and endeavor to remove toxic substances that may have formed in the alimentary tract. As the best means of attaining this object, he recommends repeated washing out of the stomach with salt water, especially when fits are anticipated, and before

the occurrence of a crisis. He also advises the use of purgatives, saline enemas, diuretics (especially lactose) and the abundant administration of milk, along with salol or naphthol as intestinal antiseptics. In the second place, endeavor to increase the activity of processes of oxidation and of normal tissue changes in general. These objects, he thinks, are best secured by the use of small doses of alcohol, careful hygiene, fresh air and moderate muscular exercise. With regard to diet he does not agree with Haig, that epileptics should become vegetarians. He has found that a purely vegetable diet gives even worse results as regards the fits than a purely meat diet, a circumstance which he attributes to the fact that vegetable albumen putrifies more readily than animal albumen. He recommends a milk diet, with plenty of milk. Lastly, we should endeavor to diminish the reflex activity of the cortical nerve centres, which in epileptics are in such unstable equilibrium. He believes that the only really effective drug for this purpose is potassium bromide. He recommends that it should be given in somewhat smaller doses than those generally used, and that it should be combined with salol. Its efficacy is increased by the antitoxic therapeutic measure already mentioned. If gastric catarrh appears, the administration of bromides should be suspended, and the attention directed to the removal of the catarrh.

---

The Bechterew Treatment of Epilepsy.—Eight cases of epilepsy treated for a period of six weeks with a mixture of bromide of potassium, codein, and adonis vernalis, are reported by De Cesare (*Rif Med.*, August 13, 1897). The medicine is given twice daily. In four cases there was complete suspension of the fits; in three other cases the fits were replaced by infrequent attacks of vertigo, and in the last case there were four attacks of vertigo and two convulsions. In each case the attacks were very much reduced in frequency; no bad results were observed. The digestion was not impaired, the pulse was fuller, the temperature normal, diuresis increased, sleep uninterrupted and calm, and the mental condition unchanged. The author believes the results were due to the combination of drugs, and not to the bromide alone.—Drs. Thistle and Greig, abstract *Canadian Practitioner*.

[The true test of value is in leaving out the Bromide of Potassium. —Ed.]

---

Nervous Vomiting.—Dr. Alfred Meisl (*Centralblatt fur die Gessamte Therapie*, 1897) reviews the diagnostic points, summing up the therapy as follows: 1. For the general neurosis, change in the surroundings, country air, sojourn in an institution, rest, hydrotherapy and general faradization. 2. Diet of solids administered in small quantities. If intolerance is severe, then rectal enemata for a few days. The stomach-tube also may be used, and milk to three ounces inserted several times daily. In mild cases one-sixth of a grain of menthol with a grain and a half of sodium bicarbonate after meals, or suppositories of one-third of a grain of extract of belladonna and half a grain of codeine are useful. If there is hysterical hypersecretion, bismuth preparations with alkalies in large doses are useful. Cold applications, as ice-bag or ether spray, may assist

the action of the drugs. Suggestion is to be made use of, either as to the effect of drugs, or that food which is introduced through the stomach-tube cannot be vomited, or a fast for twenty-four hours may be ordered, and then liquids in teaspoonful doses at short intervals given. After cessation of the vomiting, roborant medication, iron and arsenic, best as arsenical mineral waters, and strengthening feeding are necessary to prevent relapse.—*American Journal of Medical Sciences.*

---

PERSPIRATION-NEURASTHENIA.—Dr. Peyer (*Med. Times and Hosp. Gaz.*) reports the case of a man thirty years of age who, during the last four years, had perspired profusely during the day, and, during the last month, also in the night. So profuse was the perspiration that he was obliged to change his clothes several times during the night. He had become very emaciated. Many drugs were tried, but without any benefit. As the patient confessed to have masturbated for many years, the diagnosis of sexual neurasthenia was made. He was treated with sounds, and the psychrophore, and after six weeks of this treatment the perspiration ceased and the patient was completely cured.—*Cincinnati Lancet-Clinic.*

---

PSYCHIC ANESTHESIA.—Dr. Charles W. Burr, of Philadelphia, remarks that, at the November, 1896, meeting of the Philadelphia Neurological Society (*Journal of Nervous and Mental Disease*, May, 1897,) he reported the case of a woman who, suffering from mind blindness, was also unable to recognize objects by touch, though tactile sense was normal. He suggested the name tactile amnesia for the condition, maintaining that it was analogous to amnesic aphasia. At the time the report was made he had seen but one other case, and in both there were other symptoms. Soon after a gentleman came to him complaining of the same trouble, unaccompanied by other symptoms, confined to one arm, and due, as will appear, to an entirely different cause. His history is as follows: B. C., 24 years old, single, family and personal history negative. When about 10 years old he was accidentally struck on the side of the head by an axe-handle with such force as to throw him into a river, on the banks of which he was standing. At first he was thought to have been drowned, but examination of the head showed a simple depressed fracture of the right parietal bone over the motor area. He remained in a state of alternate coma and delirium for about three weeks. On recovering normal consciousness he found himself partially paralyzed on the left side, including the face, and completely anesthetic on the same side. The palsy and anesthesia entirely passed away in a few months, sensation returning before motion. He was supposed to have recovered completely until, on putting his left hand in his coat-pocket for the first time after his illness, he discovered he could not tell what he had in his grasp, though he had the sense of touch. Little attention was paid to this symptom at the time, and he was told it would soon pass away. It has not. Examination :—He is a spare but fairly healthy-looking young man. He is scholarly and thoughtful but neurotic, supersensitive and morbid. The left leg, arm and face are slightly smaller than the right. There is no

palsy of either side, but he uses the left hand a little awkwardly. Gait and station are normal. The knee-jerks are equal and a little exaggerated. There is no depression nor pain on pressure at the seat of the alleged fracture. Pressure on the vertex over an area about as large as a one cent piece causes mental confusion, a condition of dreaminess, and, if continued, light hypnotic sleep. With the eyes shut he recognizes well variations in the positions of the hands or arms. Tactile sense is normal on both sides. On the entire left side, even on the finger-tips, he fails to localize touch. He is absolutely unable to recognize any object put in his left hand, but knows he is grasping something. His grasp is good and remains good when the eyes are shut, there being no muscular relaxation even after several minutes. In the right hand there is no sensory trouble. On both sides temperature and pain sense are normal, and he can distinguish dull from sharp. There is no difficulty with the speech, vision, hearing, taste or smell. The urine is normal. Examination of the thoracic and abdominal viscera is negative.

Dr. W. M. Zimmerman examined the eyes and reports, "Right eye: The media are clear and the fundus is normal. The field is difficult to take, the eye easily wandering in any direction without any apparent reason or object. On the temporal side the red field extends beyond the blue. Left eye: The media are clear and the fundus is normal. Fixation is less difficult. The red field extends beyond the blue in the larger part of the circumference. There is practically no contraction of the field for white in either eye. The fields were taken several times on different days and were constant. The pupils are equal and react well to light and with accommodation."

To sum up, we have a man who for some years, ever since a serious injury to the head causing a temporary hemianesthesia and hemiplegia, has lost the ability to recognize objects by touch in the left hand, though simple tactile sense and the so-called muscle sense are preserved, and who has also a partial reversion of the fields of vision, is neurotic and susceptible to hypnotism.

Simple as the symptomatology of the case is, there is much in it that is at present inexplicable. It contains problems of as much interest to the physiological psychologist as to the neurologist. It differs, and this is of importance, from similar cases in the loss of the ability to localize sensation, and I cannot but believe that this inability stands in close causal relation to our patient's loss of the power of recognizing objects by touch. Touch cognition is in reality a very complex process. To do it accurately, tactile, and sometimes pain and temperature sense, muscle sense and power of localizing must be normal. We have much to learn concerning all these. Muscle sense certainly depends upon the afferent impulses from the joints, the muscles, and though in much less degree, the skin. The means by which we localize a touch on finger or toe, as happening at any one point, the psychologists have not yet settled for us, and how we group the many sensations from an object into one whole is absolutely unknown. In my other case the difficulty lay in interpreting the sensations felt, because of the loss of the stored up tactile images, the patient having in other words no sensory tactile recollections with which

to compare her recent sensations. Hence the name tactile amnesia. But in this present case, as said before, there is another element. The patient cannot localize, and it is easy to understand that if, for example, while holding a key, he cannot tell what fingers the sensations come from or even refers some to the upper arm, he can have no proper conception of the form of the key, cannot tell that is a key. It would seem as if there was here a contradiction in the statements of the patient. If he knows the positions of the fingers and can feel touch, such knowledge should aid him in recognizing the object grasped. Yet he says he cannot. Although at the mercy of his veracity, Dr. Burr believes him. Since the trouble seems to depend in this case upon the loss of the localizing sense, and we have no means of knowing whether he has tactile amnesia or not, it will probably be wiser to call it by the broader and less definite term psychic anesthesia.

What central lesion has caused the symptom and where it is situated cannot be determined. It is most probable that he had a fracture of the parietal bone with slight injury to the motor cortex and the neighboring sensory region. The injury could not have been severe or the hemiplegia and hemianesthesia would not have been so transient and the recovery so complete. But it is not proven that his present trouble depends upon the same lesion. Parietal fracture with hemiplegia and temporary anesthesia is very frequent. Psychic anesthesia is very rare. Dr. Burr is inclined to believe that in this man the condition is hysterical. He is hysterical in temperament, has partial reversal of the visual fields, and is susceptible to hypnotism. Dr. Burr thinks the physical injury has acted to suggest the symptom which in many regards is like the "systematized anesthesia," not infrequent in hysteria. This does not explain very much, but further we cannot go.

---

SULPHATE OF SODA AS A HEMOSTATIC.—J. Reverdin, of Geneva, states that he has often used with success sulphate of soda in small doses (one and a half grain every hour) in grave capillary hemorrhages, spontaneous or traumatic. The method is said to have been first employed by Kussmaul in hemophilia. Reverdin has made experiments to ascertain the mode of the action of remedy—given to animals (rabbits, guinea-pigs), mixed with their food, or by intravenous injection, it seemed to render more rapid the coagulation of the blood; used hypodermically it had not the same effect.—*Ex.*

---

FOR VAGINAL INJECTIONS.—

℞ Powdered alum, 1 ounce.
Powdered boric acid, 1 ounce.
Powdered borax, 1 ounce.
Hydrastine sulphate, 9 grains.
Carbolic acid, 20 drops.
Essence of cinnamon, 20 drops.

For each injection, dissolve a teaspoonful of the powder in a pint of water.—*La Semaine Médicale.*

# NOSE AND THROAT.

IN CHARGE OF
J. MURRAY McFARLANE, M.D.,
Laryngologist to St. Michael's Hospital. 32 Carlton Street.
D. J. GIBB WISHART. B.A., M.D.C.M., L.R.C.P.L.
Professor of Laryngology, etc., Ontario Medical College for Women; Lecturer in Laryngology and Rhinology, Trinity Medical College; Rhinologist and Laryngologist Hospital for Sick Children, St. Michael's Hospital, and the Girl's Home; Toronto General Hospital. 47 Grosvenor Street.

## ATROPHIC RHINITIS.

Dr. Krieg is of opinion that the riddle as to the true nature of ozœna has been at last solved by the bacteriological observations of Abel. The observer announced in 1893, without knowing the previous literature of the subject, his discovery of the bacillus mucosus, which he regarded as the specific micro-organism of ozœna. He had studied it in pure cultures, and made clear the distinctions between it and Friedlander's bacillus, with which it had been identified by Thoss and Hajek. In 1895 Abel published further observations on this subject. He named the organism "bacillus mucosus" on account of its forming mucous clumps in pure cultures. He found it to grow best on agar, and that if pure it does not form any stinking product. The bacillus is found most abundantly in the fluid mucus on the under surface of the crusts. This mucus has no smell when first secreted, and contains nearly pure cultures of the bacillus. Abel found this bacillus in a hundred cases which he examined, and in every stage of the disease, whether there was hypertrophy or atrophy, or whether there was fœtor present or not.

Strübing and Abel, who have worked out this subject together, define ozœna as a specific inflammatory affection with crust formation, beginning mostly in the nose, more rarely in the naso-pharynx, and caused by the presence of a specific bacillus, which gives rise to catarrhal symptoms, at first leading to hypertrophy and later to atrophy of the mucus membrane. The atrophy is caused partly through the pressure of the crusts, and partly by the irritation of the poisonous products of the bacilli. The fœtor is not an essential part of the disease, but arises from the action of the ordinary bacteria of decomposition breeding in the crusts. A general dyscrasia is not necessary to the origin of the disease, though it may favor it, and the healthiest of people may be attacked.

Dr. Krieg accepts all the conclusions of Stübing and Abel, and maintains that any theory inconsistent with them must fall to the ground.

One naturally asks, how far has this bacteriological discovery helped our therapeutics? Unfortunately, only very little, or not at all, must be the answer. Almost every germicide has been employed at some time in treating this disease, with the view of destroying the fœtor. Abel has himself made many experiments with this class of remedies, but without much success. The irregularities of the nasal cavities and sinuses, the

sensitiveness of the nasal mucous membrane to irritating substances, and the powers of resistance of the bacillus itself, all make the attainment of a cure very difficult.

Dr. Krieg trusts entirely to Gottstein's tampons in treating ozœna, which he introduces into the nose without the help of any instrument, by simply twisting the cotton-wool into a stiff, stout wick of the length and thickness of the forefinger. This wick is smeared with equal parts of white precipitate ointment and vaseline, and then introduced with a screwing movement into the nose. Such a tampon is worn for four hours in each nostril alternately, and is sufficient to keep the nose clean and free of odour without the use of any douching. This line of treatment he has seen result in a complete cure after being carried out for some years.—*Krieg, in Heymann's Handbook of Laryng. & Rhinol., Jr. L. R. & O.*

## TURBINECTOMY.

The treatment of enlargement of the inferior turbinals has received a large share of attention, but the views upon the amount which should be removed in cases of nasal stenosis vary widely. R. Lake ("J. of L.," April, 1897, p. 233) advocates the removal of the anterior end of the inferior turbinal as an alternative to turbinectomy. He performs the operation under cocaine by means of a strong pair of artery forceps, punch forceps, scissors, or snare.

Dunnas Grant ("J. of L.," May, 1897, p. 243) also advocates anterior turbinectomy. He makes an oblique incision by means of a strong pair of scissors, upwards and backwards along the attachment of the turbinated body, and removes the peninsula thus formed by means of a cold wire snare. This method of procedure he advises, if only as a preliminary to a subsequent posterior operation ("J. of L.," July, 1897, p. 368).

Delavan ("J. of L.," Aug., 1897, p. 439) advocates the method of submucous incision in certain cases of enlargement of the inferior turbinated body, and claims good results.

At a discussion during the meeting of the British Medical Association in Montreal ("J. of L.," Oct., 1897, p. 616), Greville Macdonald remarked that although it was frequently necessary to remove hypertrophied portions of the mucous membrane from anterior or posterior ends of the inferior turbinal, he had never yet seen a case where one could dream of attaining anything by total ablation of this important structure.

In the discussion which followed the general trend of opinion seemed to be that the duty of the surgeon was to preserve as much of the original structure as possible, removing such portions only as were clearly hypertrophied and giving rise to troublesome symptoms.—*Milligan, Jr. L. R. & O.*

## SPHENOIDAL SINUS DISEASE.

The sphenoidal sinus is now known to be comparatively within easy range, and the enlarging of the opening in its anterior wall is in most

cases a matter of comparative ease to the practised intranasal manipulator. The instrument which can be employed for this purpose with the greatest safety is the hook devised by Hajek,* of Vienna, a worker in whom enterprise and caution are very admirably blended. In the use of the instrument I am bound to inculcate the necessity for the latter quality, but with judgment it is capable of producing most satisfactory results.

The frontal sinus cannot be irrigated from within in every case, but the number of cases in which it can is greater than was formerly supposed, and probably with increasing skill on the part of the rhinologist the percentage of eligible cases will be extremely high. Various canulæ have been devised for the purpose of reaching it, but as Hajek very properly states, there is no single curve adapted for all cases. The direction of the passage must be cautiously investigated by means of a pliable probe, and when the shape of probe capable of entering the cavity is found, a tube modeled to the same curve may be introduced for whatever purpose is desired. The removal of all obstructions from the lower extremity of the orifice of the infundubulum is best effected after the removal of the anterior extremity of the middle turbinated body. For this purpose the snare is sometimes all-sufficient, but as a rule the proceeding is greatly facilitated by the use of punch-forceps for making a primary notch in the so-called neck of the body before the application of the snare, as recommended by Grünwald.† This materially facilitates the introduction of the instrument into the infundbulum and frontal sinus, while the removal of the posterior extremity renders the sphenoidal sinus more easily accessible.—*Dundas Grant, Jr. L. R. & O.*

---

## TREATMENT OF LARYNGEAL AFFECTIONS.

In regard to the climatic treatment of laryngeal affections, Dr. Stoerk is largely a sceptic. No physician, he maintains, can say beforehand what special climate will benefit a particular case of laryngeal disease. It is not the air which the patient breathes that does good, but the removal from his usual surroundings and the change in his whole manner of living. That this is so is shown by the conflicting opinions as to the best climate for laryngeal affections. Formerly high altitudes were regarded as unsuitable, but now many recommend them. In tubercular cases it is not the air which does good, but the improvement in the general health. Dr. Stoerk thinks that syphilitic patients subject to frequent catarrhs are much benefited by going south, though they are very liable to recurrences if they come north again.

The position of Prof. Stoerk, as probably the most experienced of laryngologists now living, makes the article of peculiar interest and value to all engaged in the treatment of throat affections.—*Stoerk, in Heymann's Handbook of Laryng. & Rhinol., Jr. L. R. & O.*

* Hajek, verbal communication.

† Grunwald, "Lehre der Nasen-elterungen," second edit.

## THE CULTIVATION OF THE VOICE BY MEANS OF TUBING-FORKS, AND THE APPLICATION OF THIS METHOD TO THE CURE OF PARESIS OF THE VOCAL CORDS.

If a sounding tuning-fork is held in the hand the vibrations may be communicated not only to the fingers, but to the muscles of the upper arm and the shoulder, and in a less degree to the throat, head and chest. A note will, therefore, be more easily sung if at the same time we hold a tuning-fork of corresponding pitch. The vibrations of the vocal cords by the exercise of the will coincide with the vibrations of the tuning-fork, and the tone will be more distinct and less effort will be required in its production. By means of tuning-forks the author succeeded in producing notes which previously he had lacked.

He also experimented on others, especially on those who had never learned to sing. After a little practice with the tuning-fork they were able to produce unaided the same note. In like manner, trained singers learned to produce notes with greater ease and resonance.

The author then tried his method in the following case of hysterical aphonia. A girl, aged fifteen, had been perfectly voiceless for two and a-half years. Massage, hypnotism, and a number of drugs had been tried, and she had been in a hospital for three months, where she was treated with baths and electricity, but without success. All other treatment being suspended, vibrating tuning-forks were placed upon the thyroid cartilage while the patient tried to sing the corresponding notes. One sitting took place daily, lasting twenty minutes, during which a series of tuning-forks, from E to $E^2$, were used. On the third day sounds were produced for the first time; henceforward only one tuning-fork was employed. On the eighth day the tones were more distinct, and the patient could say some words. On the following morning she was again aphonic, but under the action of the tuning-fork the voice soon returned and was stronger. She was able to read next day, and since then there has been no aphonia. While the above treatment was being carried out a daily laryngoscopic examination was made. During the first few days the right vocal cord gradually began to move and to approach the middle line. After the fifth sitting the left cord also moved. In a moment the cords met. The girl is still unable to raise or lower her voice, and speaks in the tone of the tuning-fork with which she last practised.

The author attributes these results to the mechanical action of the tuning-forks on the vocal cords. A possible physical effect cannot, of course, be denied.—*(Maljutin, E. N., Moscow, "Archiv für Laryngol. und Rhinol.," Band VI., Heft 2).—A. B. Kelly, Jr., L. R. & O.*

## ORTHOFORM.

The authors have experimented with *orthoform* in cases which had dysphagia as a prominent symptom, notably laryngeal tuberculosis and laryngeal cancer, and likewise after removal of the tonsils by means of the galvano-cautery snare. This drug is a light, dirty yellow

powder, slightly soluble in water, is easily dissolved in glycerine or water acidulated with hydrochloric, nitric, or acetic acid. It is feebly antiseptic, and perfectly harmless. And what is of the greatest importance, it gives immunity from pain for from twenty-four to forty-eight hours, the latter time being obtained more easily at subsequent as contrasted with primary applications. The reason of the long duration of anæsthesia appears to be its insolubility in the juices of the body. From this one learns that where there is any constant movement of or passage over the part frequent applications are usually required.—*(Lichtwitz and Sabrazes, "Le Bull. Méd.," Nov. 21, 1897).—R. Lake, Jr., L. R. & O.*

---

**METHOD OF PREVENTING DIMMING OF LARYNGEAL MIRRORS.**

The author objects to the soap method on the score of sepsis, and finds that an equally good result is obtained by using merely a wet mirror. The essential point is to remove all traces of grease from the glass with a one per cent. solution of bicarbonate of soda. When this has been done, by simply rinsing or rubbing with wool soaked in the solution, a thin uniform film of fluid will adhere to the surface. A mirror so treated remains bright during a continuous examination of the larynx lasting five minutes. Although he keeps his instruments standing in one or two per thousand cyanide of mercury solution, he finds that mirrors treated in this way last very much longer than when heat is employed.—*(Vacher, "Ann. des Mal. de l'Oreille," etc., Sept., 1897).—Ernest Waggett, Jr., L. R. & O.*

---

For Eczema, Impetigo, etc.—

℞ Glycerin paste, 30 parts.
Tar (purified), 2 parts.

Add hot starch in powder sufficient to make a pomade.

This tonic calms the itching, dries the excoriations, resolves the redness—in a word, it is astringent and restorative without producing irritation.—M. Gibert (Paris).

---

For Chronic Ulcer of the Leg:

| | |
|---|---|
| ℞ Carbolic Acid | 2 parts |
| Boric Acid | 10 " |
| Powdered Camphor | 7½ " |
| Ichthyol | 20 " |
| Oil of Sweet Almonds | 9½ " |
| Oxide of Zinc Ointment | 100 " |

—*Rev. de Therapeutique.*

---

For Asthma with Emphysema.—

| | |
|---|---|
| ℞ Potassii iodidi | gr. v. |
| Liquor, potass. arsenitis | *m* iiss. |
| Elixir, simplicis | q.s. ad ℥ i. |

S. One drachm after meals and at bedtime. Increase the dose if necessary.—J. C. Wilson, *Coll. and Clin. Rec.*

# MEDICAL SOCIETY REPORTS.

## TORONTO CLINICAL SOCIETY.

The regular meeting of the Society was held on the 10th of March in St. George's Hall.

Dr. Albert A. Macdonald, President, occupied the chair.

There were present the following Fellows: W. H. B. Aikens, G. S. Ryerson, Allan Baines, J. A. Temple, Edmund E. King, Albert A. Macdonald, Harold Parsons, Herbert Bruce, Elliot Brown, George A. Peters, Bertram Spencer, Alton Garratt, George Bingham, Geoffrey Boyd, Charles Trow.

The minutes of the last meeting were read and adopted.

*Syndactylism.*—Dr. W. H. B. Aikens presented a case showing the above condition in a man aged 32. The fingers involved were the ring and middle of each hand. The patient had a cousin with a similar deformity.

Dr. George A. Peters presented a patient who had recovered from a compound fracture of the skull with loss of brain substance, with the following history: H. McH., æt. 8 years, was admitted to hospital Sept., 1897, with a history of having been injured through being knocked down by a running horse. He reached the hospital 2 hours after the accident. On examination a wound about ½ in. long was found on the right side of the head. Its exact situation was ½ in. from the middle line and ½ in. in front of a line dropped vertically through the external auditory meatus.

Brain substance could be seen oozing from the wound, and pulsation could be detected; a deep depression in the vault of the cranium could be felt subtending the wound. He was conscious but somewhat somnolent, only rousing on being spoken to sharply or loudly. So far as could be learned, he had never completely lost consciousness. There was complete paralysis of the left arm. The left leg and face retained power of movement.

The diagnosis of compound depressed fracture of the motor area having been made, preparations were made to raise the depressed bone. Guarding the actual wound with a compress soaked in 1-20 a. ac. carbolic, the whole scalp was shaved and disinfected in the usual way.

*Operation.*—A crescentic incision, convexity upwards, with a radius of ½ in., was made so as to include the wound, and the scalp over the whole of the depressed area was raised.

The depression was found to be oval in shape and about 1½ in. in its longest diameter. It was outlined at its margin almost all around by a fissured fracture of the outer table, and from this fissure numerous lines radiated to the centre, which was about ½ in. below the general surface of the skull. There was a small amount of brain substance oozing from the centre of the depression. One of the small triangular pieces of bone was removed, and through the opening this produced the remaining fragments were sprung back to their normal level. The fragment first removed was then replaced. The whole wound was then closed by horse-

hair sutures, a small drain of iodoform gauze being placed in the original wound.

The temperature the next morning rose to 102⅘ and pulse to 124. By night the register was 101⅘ and 114. Next morning 99 and 94. The subsequent history showed rapid recovery. The wound healed throughout by first intention, but the paralysis of the arm was recovered from very slowly. In about one month, however, all the motions were recovered except extension of the wrist and of thumb and fingers, and these motions are still imperfect, though gaining slowly.

The flexors of the hand are also weak. At present he is able to extend the wrist while the fingers are flexed, or to extend the fingers while the wrist remains flexed; but not to perform both movements at once. The reason for this apparently is that the extensors are incapable of successfully overcoming the tonic contractions of the flexors, while the latter are put upon the stretch by extending both the wrist and fingers.

The treatment has consisted in exercises, in voluntary movements, massage, electricity, and the functions are still slowly improving.

It is evident that the portion of the cortex that was destroyed is the area which normally presses over the movements of extension of the wrist and fingers. Horsley and others have shown that while there are certain well-defined areas which control certain movements, there are frequently outlying areas which seem to have a subsidiary influence, and may become functionally in the event of destruction of the main centres. In this case it is to be hoped that these subsidiary centres may prove adequate to the performance of the duties thrust upon them by the destruction of the main centre. This patient has youth in his favor, and it is certain that the powers of adaptability are greater in immature than in fully matured brains. In the meantime, it is important to maintain the nutrition of the nerves and muscles by electricity and massage.

It was Hippocrates who said that no injury of the head is too trivial to be despised or too serious to be despaired of. Injuries to the brain produced by heavy blows or falls upon a broad surface are apt to be productive of a certain amount of bruising and laceration at the seat of injury, together with a greater amount of injury of the cortex at a point diametrically opposite.. The explanation is that the blow starts a wave in the semi-fluid brain tissue which breaks violently against the bone opposite, thus producing a bruising and laceration of the cortex at that point, with more or less bleeding. Between these two points there may be also traced a track of bruised brain tissue with minute punctiform hæmorrhages and molecular injury.

On the other hand, injuries to the brain produced by monetary impact of an injuring agent of small area is much less likely to start such a wave, and, consequently, the injuries produced by sudden, violent blows, are usually limited to laceration of the brain substance immediately beneath the part of the skull struck. Thus, non-penetrating or glancing bullet wounds are said to produce the most typical localized cortical lesions. The case just cited is evidently one of localized injury, though we do not know exactly what the nature of the fracturing force was—probably the cork of a horse's shoe.

In regard to prognosis, it must not be forgotten that in an injury of this kind there occurs during the process of repair a soldering of the various membranes together. The dure also becomes densely adherent to the skull, and thus there is an anchoring of the brain at that part, which, in later years, may be productive of headache, epileptiform convulsions, or attacks of giddinesss on sudden movement.

Dr. Peters presented a second patient upon whom he had performed a plastic operation to relieve cicatricial fixation of the thumb in flexion. The following was the history of the case:

The thumb in this case was bound down by a very dense and deep cicatrix resulting from a deep suppurating wound in the thenar eminence. The short flexor muscles seemed to have sloughed away, and the skin was firmly bound down to the metacarpal bone and the annular ligament. The thumb was drawn inwards so that it lay across the middle of the palm, its tip pointing toward the little finger.

In the operation the cicatrix was divided freely; also the outer part of the contracted annular ligament. The anterior and lateral ligaments of the meta-carpo-phalangyeal joint were also divided, as well as the remains of the short muscles of the thumb. The long flexor tendon was left undivided, but was dissected out of the cicatrix so that it moved freely.

The wound thus made on the palmar aspect of the thumb was filled in by dissecting up a flap from the dorsum. This flap was one and a half inches long, by three-quarters of an inch wide, and its base was adjacent to the wound in the palm. Care was taken to maintain a good thickness to this flap, so as to insure its vitality. Having been very freely dissected up, the flap was swung from the back to the front of the thumb and stitched into place by horsehair sutures.

The wound on the back was closed in the same way, after very freely undermining its edges in all directions.

The wound was not dressed for six days and was found to have healed throughout by first intention.

Dr. George A. Bingham showed a boy under his care who had suffered from compound fracture of the superior and inferior maxillæ, the base of the skull, with extensive injury of the soft parts.

In a brief description of the case, Dr. Bingham said:

I present this case more as a curiosity than anything else. Some time in December this boy was riding a bicycle at a rapid rate along the devil-strip with his head down. He came in contact with a butcher cart which was being driven at a rapid rate from the opposite direction, the shaft struck him in the face, crushing his nose and his eye out of sight, passing through the orbit, fracturing the superior maxillæ, fracturing the inferior maxillæ, fracturing the base of the skull, and carrying away a portion of the facial nerve. Dr. R. J. Wilson was called and at his request I operated on the patient the night of the injury. We first built up a nose, then brought the eye into position, adjusted the orbit and the fractured superior maxillæ and hard palate, stitching the soft parts over the hard palate, put the jaw in a splint, and got him in a fair condition. He was vomiting blood freely. Those who saw him thought there was no hope

for him, but the subsequent history shows that it is hard to kill a boy these days.

Occasionally now a small portion of bone comes from the right ear. Owing to the damage done to the facial nerve on the right side the function of the muscles on that side is gone and gives the face the appearance it has. The vision of the injured eye now is very good.

Dr. Bingham presented a second patient, with the following history:

The patient, a little girl, on Jan. 23rd, 1896, fell while playing and scratched the skin over the right patella. On the same day it got its feet wet. The wound was not attended to. Five days after Dr. Powell was called in; he noted a flushed area below the patella on the upper end of the tibia, which was very tender. He considered the case one of osteomyelitis, and sent her to the hospital under the care of the speaker. On the 29th he (Dr. Bingham) trephined into the epiphysis of the tibia and found a pus cavity, which he scraped out. Healing took place readily. Three days after the patient began to complain of pain in the lower epiphysis of the right humerus. Incision was made and drainage, healing following. The next point attacked was the upper epiphysis of the same bone. Similar operation was done. The next bone attacked was the right tibia, at its lower end. Since that time until now (about two years) the patient has returned periodically to the hospital for treatment, undergone operation on some bone and recovered. On one occasion a considerable portion of the right clavicle was removed; at another the scapula on one side. Few of the long bones had escaped. A considerable portion of two ribs had been removed. The speaker thought that the disease would be sure to reappear. The patient had been put on tonic treatment, and she had the best hygienic care. The last bone affected was one of the ribs on the left side. The wound of this operation was not yet quite healed.

Dr. A. H. Garratt then reported a case, the salient points of which were as follows:

On January 10th, 1898, at 6 p.m., I was called to York Street to see a case of pistol shot wounds of the abdomen in a woman thirty years of age. Upon my arrival I found that a quarter of an hour before the patient had been shot in two places with a thirty-two calibre revolver. The pistol had been discharged first from a distance of one foot, and the bullet had struck one inch to the right of the median line and three inches above Pupart's ligament. This bullet followed a subcutaneous course, and was afterwards removed near the inferior iliac spine, five and a half inches from the point of entrance. The second bullet struck two inches to the right of the median line, and three inches above the umbilicus, and had been discharged from a distance of nine feet.

The patient complained of little pain, but was very much excited, having climbed an eight-foot fence, wrested the pistol from her husband and would-be murderer, and shot a strange man in the thigh who tried to stop her on the street. I made a hurried examination, demonstrating with a probe that one bullet did not produce both wounds, and had the patient sent to St. Michael's hospital under my care.

I visited my patient again at 8 p.m., and found her lying on her back,

with knees drawn up and suffering great pain all over the abdomen, although the house surgeon had given an eighth of a grain of morphine before my arrival. The pulse was 110 and the temperature 100°. The abdomen was markedly distended and the face anxious. I decided on laparotomy at once, and ordered one-quarter of a grain more of morphine while the preparations were being made. It was more than an hour before the patient was prepared and my assistants ready. Dr. J. N. E. Brown administered ether; and during the first stage of anæsthesia the patient vomited a pint of blood clots and food. I made my incision 4 in. in length in the median line above the umbilicus and over the track made by the second bullet, through which the probe had passed.

On opening the peritoneum there was a sudden escape of gas, leading Dr. Bingham, who assisted me, to suspect that my knife had wounded a knuckle of intestine. On careful search this was disproven.

The transverse colon was pushed down and the stomach brought up in the wound, and after a short search a perforation of its anterior wall was found; this I closed with 9 Lembert sutures of fine silk and continued the search for a wound of exit. After going carefully over the stomach and neighboring organs, and finding no other wound, the peritoneum, in easy reach, was cleansed with sponges wrung out of hot sterilized water and the abdominal wound closed with deep silk-worm gut sutures including all the tissues. A strip of iodoform gauze was passed down the bullet track and brought out between the sutures. Iodoform was dusted over line of wound, and iodoform gauze, sterilized gauze and cotton wool completed the dressing, which was held in place with a cotton binder.

The first bullet near the iliac spine was now removed through a small incision and its track lightly packed with a narrow strip of iodoform gauze. I then ordered a search to be made in the vomited matter for the second bullet, but unfortunately it could not be found, and I am still in doubt as to its whereabouts.

Patient recovered from anæsthetic nicely but complained of a little pain all over abdomen.

The next day, Jan. 11th, was given nothing but hot water, in 3 doses, per mouth; had several attacks of vomiting.

On following day, Jan. 12th, was given an ounce of beef tea per mouth, and the mouth was frequently washed out with ice water; feeding by nutrient enemia was commenced, and there was no more vomiting. Patient still complained of tenderness over the abdomen.

The dressing was changed and shorter pieces of gauze inserted in bullet tracks.

From the 12th until the 16th patient was fed on nutrient enems and steadily improved.

On the 16th feeding by the mouth was commenced and continued without ill effect.

On the 31st the stitches were removed and the wound was perfectly healed; the bullet tracks were also healed. Patient was allowed to sit up on Feb. 6th, and was placed on the regular hospital diet. This operation was not undertaken until symptoms indicating perforation of stomach or intestine showed themselves, thereby disproving the assertion of Dr.

Parke, of Scranton, Pa., in the *New York Medical Journal* of Jan. 15th, that at such time the operation was always too late.

Dr. George Peters said he was not certain whether or not one should not in these cases, when the history showed pretty clearly that the bullet was fired at close range, explore the wounds at once without waiting for symptoms. If the bullet were fired in a fairly direct way it would be almost sure to go through the abdominal wall. The risk of an exploratory incision was not great.

Dr. King pointed out that it was lucky that the bullet had entered the stomach instead of lower down, for the contents of that viscus had, no doubt, contributed to the stoppage of the course of the bullet.

Dr. Ryerson rose to say that he had visited many of the leading hospitals of Europe and the United States, and nowhere had he seen better surgery than in Toronto.

Dr. Temple made some remarks on a case of carcinoma uteri. The patient was a woman who had entered the pavilion at the General Hospital under his care. Her age was only twenty-eight, and she was the mother of four children. She was greatly emaciated. On examination he recognized a cancer of the body of the uterus, and the disease so far advanced that he could not offer the slightest hope by operation. The disease had involved the uterus and had caused hydro-nephrosis.

Dr. Harold Parsons read the post-mortem report made by Dr. H. B. Anderson, as follows:

Mrs. M., aged 28. General emaciation. Subcutaneous fat scanty. Fundus uteri three inches above the symphisis pubis. The thoracic and abdominal viscera were all examined, but presented nothing special of note except as follows: Right ureter was three-quarters inches in diameter, being immensely distended with fluid. Right kidney was very pale in color. Weight, six and a quarter ounces, and showed marked hydronephrosis. The opening of the ureter into the bladder was involved in the cancerous growth. Left ureter slightly enlarged. Left kidney pale and showed a lesser degree of hydronephrosis. Weight, four ounces. The ulcerating cancerous mass involved the whole body of the uterus. The cervis was entirely destroyed The growth involves the whole of the bladder, ulcerating through in the median line, producing a utero-vesical fistula. The orifice of both ureters was involved in the growth. Below it extends into the upper part of the vagina, and behind into the adjacent parts of the rectum. (Bladder was cut through from in front.)

Microscopic sections of the growth which I submit show the structure of a glandular cancer, adeno-carcinoma. The cancer evidently originated from the glandular epithelium, but whether those of the cervix or body of the uterus the microscopic examination would not determine.

Dr. Peters presented two astragali he had removed from a case of double club-foot upon which he had operated. He described the various incisions recommended for the operation.

Dr. G. S. Ryerson and Dr. B. Spencer were appointed a committee to act with committees from other societies in the consideration of the proposed Academy of Medicine.

The Society then adjourned.

## TORONTO MEDICAL SOCIETY.

The regular meeting was held on Feb. 17th, 1898.

Dr. Peters reported a case of gun-shot wound of the femur

Dr. A. Primose reported a case of amputation for extensive cellulitis of the leg in a patient who had Bright's disease; a second case of lithotomy for a calculus whose nucleus was the tip of a catheter which a prostatic had glued on with shellac; a third case—amputation of the leg for tubercular disease of the tarsus and bones of the leg in a man suffering from pulmonary tuberculosis.

Discussion by Drs. Wilson and MacMahon.

Dr. B. E. McKenzie presented a boy with congenital absence of a portion of the third, fourth and fifth ribs.

Discussed by Drs. Primose, Carveth, Peters and Cameron.

The Radical Cure of Ingrowing Toe-nail was the title of a paper presented by Dr. G. A. Peters.

Discussed by Drs. Powell, Oakley, Carveth, MacMahon, and Galloway.

The Society then adjourned.

The weekly meeting of the Society was held in the Council chamber Feb. 24th, 1898.

Dr. MacMahon presided.

After the minutes, Dr. McKeown presented photograph of a boy, aged 16, with some congental deformities. The arms were rudimentary-conical stumps. The right femur was represented merely by a ball of bone, and the left was much shorter than normal.

Dr. Gilbert Gordon discussed the case.

Dr. T. MacMahon reported a case of gall-stones followed by suppurative cholangitis.

Dr. Dwyer reported the post-mortem findings.

Dr. Dwyer presented the following specimens: A small carcinoma of the stomach from a patient who had died of pneumonia; a trachea with a tuberculous ulcer; a larynx showing syphilitic and tuberculous ulceration.

Dr. MacMahon's case was reported by Dr. Parsons, Dr. G. Gordon, and Dr. McKeown.

Dr. G. H. Carveth read a paper on Some Observations on Examination of Urine. Dr. Oakley discussed the paper.

Dr. D. J. Gibb Wishart gave an address on Deviations and Spurs of the Septum. Discussed by Drs. Parsons, Wm. Graham, Oakley, Starr, and G. Gordon.

---

MENTHOL IN VOMITING.—*The Journal des Praticiens* advises the following for obstinate vomiting.

| | |
|---|---|
| Menthol | 2 grains |
| Hydrochl. of cocain | 4 grains |
| Alcohol | 2 ounces |
| Syrup | 1 ounce |

Sig.—Small teaspoonful every half-hour for several doses.—*Therapeutic Gazette.*

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.



EDITOR:
JOHN L. DAVISON, M.D.

ACTING EDITOR:
J. T. FOTHERINGHAM, M.D.

ASSOCIATE EDITORS:

*Surgery:*
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine:*
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology:*
G. P. SYLVESTER, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics:*
CAMPBELL MEYERS, M.D.

*Pathology and Bacteriology:*
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat:*
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D.

*Pædiatrics:*
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M.D.

*Eye and Ear:*
G. STERLING RYERSON, M.D.
C. TROW, M.D.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* The Canada Lancet Publishing Co., 24 Wellington St. W., Toronto.

FRED. H. GRAY, Business Manager.

**The Largest Circulation of any Medical Journal in the Dominion.**


## Editorial.

### CHRISTIAN SCIENCE WINS.

According to a despatch from Albany, N.Y., to the *Mail and Empire* of Friday, the 18th, Senator Henry J. Coggeshall was the centre of attraction for fully 500 women interested in Christian Science, and the occasion was a hearing before the Committee on Public Health on a bill introduced by the senator, prohibiting any one not licenced as a physician from practising the healing art in New York.

Speeches against the bill and praising the methods of Christian Science were numerous, amid the cries and groans of hysterical women present to give testimony of cures made to their personal knowledge by means of prayer on the part of the Scientists.

So great was the demonstration that the senator, "in one of the graceful and amiable speeches for which he is noted," as the paper naively puts it, agreed that the bill should be so amended as not to include those desirous of practising Christian Science.

Political expediency must be the only excuse for such a deplorable setback to the efforts of modern civilization to raise the standard of medicine, and goes to show that matters pertaining to medical practice should not be left in the hands of the laity, who are perfectly willing, if the New York State Senate is any criterion, to legalise witchcraft professors and voodoo doctors next.

Occurring as it has done in the banner state of the Union, the effect must of a necessity be of a very injurious nature to medicine throughout the United States, setting as it does a precedent for legislative bodies only too desirous of furthering their own ends by pandering to ignorant and pretentious sects. The cloak of religion, like that of charity, covering a multitude of sins, what ignorant egotists these so-called Christian Scientists are, to think that an Almighty infinite Deity would give personal attention to their ailments, brought about in the majority of cases by some infraction of His natural laws, which have existed from the commencement of all things !

It is a pity that they cannot see that these laws of Nature govern all things of a mundane nature; that every effect is the result of some primary cause, however remote, acting through a chain of events having a bearing or relationship to one another.

They, however, choose to ignore these scientific truths, and call upon God to perform miracles on their behalf at so much a miracle with the familiar flippancy of a Salvation Army recruit.

We in Ontario must not be too ready to throw stones, for we ourselves are truly living in glass houses, and it would scarcely be a matter of surprise if the Ontario Government succumbed to an attack of a similar nature made upon it in the name of Christ by some mob of imperfectly sexed vixens and hysterical sufferers from unsatisfied desires, it having in the past shown clearly an animosity whenever any bill has been introduced protecting the medical profession of the Province. The fact is, one often wonders what protection exists. On every hand we find nurses conducting an obstetrical practice, Munyon and the Viavi Co. doing gynecology; doctors of refraction in jewellery shops doing the work of the oculist; and with the sanction of a legislative body that requires a long and costly course of study on the part of those desirous of practising scientific medicine.

Hospital and Dispensary clinics with Government grants, debased by patients accepting charity from medical men sometimes poorer than themselves, poorer on account of their own slothfulness and inertia that seems to paralyse any efforts made to bind them together, to assist the aggression of the general public, or to endeavor to remove the great evils handicapping them in the struggle for existence, one of the worst of which is Lodge or contract work, which is so degrading and entirely unbusinesslike that it is perhaps not so much wonder after all that the members of parliamentary bodies consider men so lost to reason, unworthy of being considered seriously. Let the medical men awaken, remove the beams from their own sleepy eyes, and, seeing clearly the humiliating position they occupy, they will be able more consistently to remove the motes from the eyes of the laity. The Canadian practitioner, however, can extend his

sympathy to his brother of New York State, for he too knows of the evils attendant upon the efforts of the Christian Scientists to arrogate to themselves powers of a supernatural order in his own country.

From time to time the press and police courts testify to some sad case where an innocent life has been taken by what we might term "murder by omission," and nineteenth century fetich worshippers offer up their victims to the insensate Juggernaut of intolerance and superstition.

M. M.

## CHLOROFORM AS AN ANÆSTHETIC.

No thoughtful or well-educated man ever gives an anæsthetic without a grave sense of the responsibility of his position. Indeed, in the majority of cases, we believe the anæsthetist has the worst of it; the surgeon having much less cause for anxiety during the operation, at least, than he who wields the inhaler.

There has been a very great amount of time, thought, and money spent in the endeavor to ascertain the true cause of death when it occurs from the exhibition of chloroform as an anæsthetic. One Camp whose originator was Lynn, held that death came from the failure of respiration, and that whoever gave the drug intelligently watched that function; another School, having as adherents many able and noted men, believed that the whole danger lay in cardiac failure, and that that was the function to be looked to.

Everyone remembers the commission appointed by the Nizam for the scientific study of the subject, and the contradictory conclusions reached by them. More recently Dr. H. A. Hare of Philadelphia, and Drs. Gaskell and Shire of Cambridge, have pursued the subject, and from a paper by Hare, read last January before the College of Physicians of Philadelphia, it appears there is still a wide divergence of opinion as to the cause of death. Gaskell and Shire hold that anæsthesia can be produced by chloroform, without causing a marked fall of blood pressure, and that when there is a fall it is due to cardiac failure.

Hare, on the other hand, believes that the fall of blood pressure in chloroform anæsthesia is "extraordinary," and that it is due, not to cardiac enfeeblement, but to depression of the vaso-motor system, by which the patient is bled into his own vessels. He believes that there is some cardiac weakness, and dilatation produced which add to the fall of pressure, but that it is to the paralysis of the vaso-motor system that we must look for by far the most important cause of death.

He makes the startling statement that death does not come directly either from cardiac or respiratory paralysis by the drug, but *from the want of sufficient blood* to be sent to the respiratory centres and to the heart.

Dr. Hare does not deny that chloroform is a powerful depressant poison to both the respiratory centre and the heart, as it is a poison to all protoplasm when applied in excess. But he believes that when properly given by inhalation it produces a death like that resulting from hemorrhage, in which respiration fails through the starvation of the centre

from want of blood, and that failure of the pulse results from vaso-motor paralysis, the patient becoming pulseless because the heart has no blood to pump, that fluid having stagnated in the widely-dilated vessels.

If it be certain that the drug produces such widespread paralysis of the vessels as Dr. Hare believes it does, then his explanation is the most reasonable and scientific that we have yet seen offered ; for it is known that the relaxed veins together with the capillaries of the body will hold many times the whole normal quantity of blood.

Laboratory evidence seems generally to uphold this doctrine, and clinically we have certainly for years acted as if it were true.

The most certain and generally used method of resuscitation is inversion of the patient together with artificial respiration, which simple means has saved many lives.

It simply means that gravitation and pressure are called into play to force the stagnated blood out of dilated abdominal and other vessels into the heart, giving the heart something to work on, and thus overcoming the anæmia of the respiratory centre as well as that of the heart itself.

Following these remarks, Dr. Hare concludes "that while chloroform in its general depressing power depresses all vital functions, it is the question of blood pressure which is most important, and, therefore, in the use of chloroform we should always *keep the head low, precede the use of chloroform by atropine hypodermatically, bandage the limbs if the case is feeble or already bloodless, and if necessary place compresses on the belly and apply them deeply by pressure if a failing circulation is developed.*"

We may add that we were much impressed by a recent article by Shepherd of Montreal, who advocates, and gives scientific reasons for his advocacy, the use of equal parts by weight of ether and chloroform. Since reading his article we have used nothing else, and have been much pleased with the combination.

---

## PATIENTS IN PRIVATE WARDS IN HOSPITALS.

The superior advantages of hospital treatment are recognized not only by members of the profession, but by patients and their friends, mainly in consequence of the excellent nursing and appliances to be obtained in the private and semi-private wards. Members of the profession not recognized on the regular staff of the several hospitals are enabled to send in and attend any patient they choose within the private wards, which range from $10 to $12 per week, or in semi-private, from $6 to $7 per week. Many persons in medium circumstances are not able to obtain the required nurses and attention at their own homes on account of the expense, and in hotels and boarding-houses it is impossible to have surgical or medical treatment carried on properly. By the time the patient's board is paid for, the nurse's board and salary, and other extras for food and attendance, but little is left for the medical attendant, whose account is uusually left to the last, or perhaps never paid. On enquiry, we find that the opening of the private and semi-private wards,

both at the Toronto General and other hospitals in Ontario and in Toronto, has proved most satisfactory to all concerned, and treatment of patients by their own family physician or surgeon, in these wards, is becoming very popular. The medical attendants themselves are brought into closer touch with hospital work, and are often enabled to be present at interesting operations, whereas if they had not special cases of their own their visits to the hospital might be few and far between. They also have the advantages of having their patients properly prepared for operations, and of having the use of all surgical appliances and instruments. We congratulate the Trustees of the General Hospital on the continued success which has been achieved in opening these private wards to the medical men of Toronto. During the last few years the number of patients attended in private wards by physicians of their own choice has largely increased. It must be remembered that no Government grant is allowed for patients in private or semi-private wards in the Toronto General Hospital, so that the fees have been made as reasonable as possible considering the amount of nursing and attendance obtained.

## VICTORIAN ORDER OF NURSES.

The daily papers of Toronto have not forgotten to announce the fact that the new order of "cheap" nurses has been launched in Toronto, and that telephone No. — will secure the services of a district nurse at any hour of the day or night. Lowest charge for visit five cents, maximum charge for visit fifty cents. How would it do for the regular trained nurses to have a changeable tariff also, in order to compete with this unknown quantity so recently brought in against their vocation? A "district nurse" is well paid, housed and fed and clothed, whereas a regular nurse has to obtain work, and then get money enough to house, feed and clothe herself.

Would it not be well for our nurses to think over a plan by which they could arrange to pay visits and collect fees for each and every service? If a nurse had a visiting list of six patients a day at twenty-five cents, her income would be $1.50; if at fifty cents a visit, $3 would be her pay. Surely the ill-advised progenitors of this gigantic scheme of "*free nursing*" should have endeavored to protect, in some little way, the rights of those young women who have spent their time and brains in obtaining a profession by means of which an honest living might be made. The nurses here had not even the satisfaction of seeing a Canadian-trained nurse made superintendent of the Toronto branch, "a Bellevue nurse having been selected."

The sending of these young women to the "gold fields" is a question to be carefully considered, both from a moral and professional standpoint. *The Montreal Medical Journal* speaks plainly, and denounces the new scheme in no uncertain language. It seems strange that the voice of the profession and the advice of the medical journals and the opinions and resolutions of the medical societies of the Dominion from Halifax to Vancouver should be so totally ignored by the powers that be at Ottawa.

## TRINITY MEDICAL ALUMNI ASSOCIATION.

The next meeting of the above Association will be held in the Educational Department, (Normal School) Gould Street, on Wednesday, April 6th, and will consist of Morning and Afternoon Sessions, when the following programme will be carried out:—10.15 a.m., Routine Business, Reading of Reports, Election of Officers, etc; 10.45, Reading of Thesis granted first place in the Medal competition; 11.00, Some Surgical Affections of the Rectum, Dr. F. LeM. Grasett; 12 00, Adjournment for Luncheon; 2.00 p.m., Some points in Abdominal Surgery relating to Intestinal Obstruction, Dr. Henry Howitt, Guelph; 2 45, The care and Modification of Milk for Infants, Dr. Leroy Milton Yale, New York; 3.30, On the nature of those Joint Affections usually called Chronic Rheumatism, Dr. Charles G. Stockton, Buffalo, N.Y.

General Discussion will follow the reading of each paper. Convocation for the conferring of degrees in Medicine will take place at Trinity University at 5 p.m. The Annual Banquet will be held at the Rossin House, at 8.30 p.m., to be followed by the President's Address, Music and Speeches. The Association Gold Medal will also be presented to the successful candidate.

Tickets for the Banquet may be obtained from any officer of the Association.

The Secretary would be pleased to receive the present addresses of as many of the Alumni as possible, also changes of address, or other items of interest.

HAROLD C. PARSONS, SEC'Y.,
97 Bloor Street West.

## THE ONTARIO MEDICAL ASSOCIATION.

The next meeting of this vigorous and flourishing Society will be held at Toronto, June 1st and 2nd, under the presidency of Dr. Britton. The outlook is for a good meeting, and it is to be hoped all members will make arrangements to be present, and, so far as practicable, join in the proceedings, either by sending papers or taking part in the discussions which follow.

We are inclined to think that heretofore such work has been too much relegated to the few. Ontario medical men are, as a body, modest, which speaks well for their education, but we are sure that each member of this Association can add his quota to the practical interest and ability of the meeting.

## THE AMERICAN MEDICAL ASSOCIATION.

The next meeting of this Association will be held at Denver, June 7th to 10th, 1898.

The committee expects to obtain a one-half rate, and 30-day limit on roads west of Chicago, and a reduction on eastern roads.

## PERSONAL.

Dr. Meyers has gone to Philadelphia to take a course with Weir Mitchell at the Nervous Clinic.

## EDITORIAL NOTES AND CLIPPINGS.

PRIAPISM.—Priapism in infants and children is induced by reflex action in cases of long, tight, adherent prepuce, of stone in the bladder or prostatic urethra, and of worms in the rectum:

In adult subjects, symptomatic of stone in the bladder, stone in the prostatic urethra, stricture, cystitis, and observed during retention; in these cases the uneasy or painful sensation is felt in the glans penis, while the body of the organ usually is only moderately congested and sometimes curved downward or laterally.—This condition disappears upon the removal of the cause:

Priapism symptomatic of gonorrhœa, with perhaps involvement of the corpus spongiosum and downward curvature.—This condition is painful and transitory, and may occur several times during the night; in cases of downward curvature of the penis due to inflammatory engorgement of the corpus spongiosum and spasm of the musculature of the urethra the term *chordee* is applied:

Priapism due to the ingestion of cantharides, which is a form that is seldom or never seen now, since this drug is so rarely used in medicine:

*Essential priapism.*—This form may be divided into four varieties, viz.: Priapism caused by injury to the spinal cord (either high up or low down) and by blows or violence inflicted upon the perineum; priapism which is a symptom of cerebral or descending spinal-cord disease; priapism which occurs after alcoholic and sexual excesses; priapism which comes on a person in ill-health in whom it is difficult to obtain data as to local injury and causation, and in which cases there is now a tendency to look upon leukemia as the ætiological factor.—W. R. TAYLOR (From *Medical Age*).

---

PICRIC ACID IN CHRONIC GONORRHŒA.—Bochon (*Méd. Mod., Med. Rec.*) recommends picric acid in chronic gonorrhœa and claims cures after from four to ten injections. In cases in which the pus is free from gonococci and contains but a few formed elements, he employs a solution in the strength of 1 to 100; when the pus is rich in formed elements he begins with a 1 to 200 injection; as soon as gonococci are present, an injection of silver nitrate, 1 to 50 or 1 to 30, is made, and on the next day picric acid, 1 to 200, is used, and on the following day 1 to 100. The instillations are made every second day, are painless, and cause very slight reaction.

---

AN ORIGINAL WAY OF DOING A VAGINAL HYSTERECTOMY.—Dr. J. D. Arnold, before the California Academy of Medicine, October 16, 1897. (*Med. Rec.*), reported a case in which a midwife, after having delivered a woman, thought she saw the head of a second child protruding from the

vagina. She seized it with both hands, and violently delivered, as she supposed, a second child. What she did deliver was an inverted uterus, completely tearing it away from its attachments. The physician who was called in did nothing but tampon the vagina, and the woman made a complete recovery. No arteries were ligated, either *en masse* or singly.

PSORIASIS:

| | |
|---|---|
| Ichthyol | ℥i |
| Acid salicylic | ℈i |
| Zinci oxidi | ℥ii |
| Amyli | ℥iv |
| Petrolati | ℥i |

Sig.—Apply locally, twice a day.—*American Medico-Surgical Bulletin.*

NITRO-GLYCERINE FOR SCIATICA.—Troussevitch has cured several obstinate cases of sciatica by giving the lollowing drops.—*Pract:*

℞. Solution of nitro-glycerine (1 per cent).....dr. ss.
Tinct. of capsicum .....dr. iss.
Peppermint aq .....dr. iii.

M. Sig. Five drops thrice daily, in a tablespoonful of water, for the first three days, then ten drops thrice daily on the subsequent days.

CAMPHOR AS AN ANTIGALACTOGOGUE.—Hergott (*Rev. Méd. de l'Est*), being dissatisfied with the effect produced by the usual antigalactogogues, including antipyrin, has tried camphor, and finds that nine and a fourth grains a day divided into three doses, and given for three days, nearly always produce a remarkable diminution of the secretion. He has used it in thirty cases, having been first led to try it by the good results obtained by Kiener in animals, especially milch cows.—*Brit. Med. Jour.*

## Book Reviews.

THE AMERICAN TEXT BOOK OF OPERATIVE DENTISTRY.—In contributions by eminent American authorities. Edited by Edward C. Kirk, D.D.S., Professor of Clinical Dentistry, University of Pennsylvania, Department of Dentistry. In one very handsome octavo volume of 699 pages, with 751 engravings. Cloth $5.50; leather $6 50 net. Lee Brothers & Co., Publishers, Philadelphia and New York. Toronto, McAinsh and Kilgour.

Within the last few years the profession of Dentistry—itself a highly specialized branch of Surgery—has rapidly developed within its limits many specialties, thus rendering a comprehensive and up-to-date treatise of the entire range of practice from the pen of any one author an exceedingly laborious and difficult undertaking.

Through the composite authorship of the volume before us every aspect of Operative Dentistry is ably dealt with by writers who may well be considered authorities in the various departments under consideration.

The work resolves itself into three divisions, viz., Dental Anatomy, Operative Dentistry, Dental and Facial Orthopedia.

This latter subject of dental irregularities and their correction, together with many forms of facial deformity, is very exhaustively dealt with, and while the entire work is especially recommended to the student, it should find its way into the hands of the general practitioner and will be found an extremely useful volume.

# PUBLISHERS' DEPARTMENT.

MALTINE WITH COCA WINE.—We are indebted to our friends the Maltine Company for supply of blotters, produced in the elegant style which characterises all the announcements of this well-known house—whose preparations hold front place in the esteem of all progressive physicians. Concerning the preparations set forth on these blotters we have no hesitation in pronouncing it one of the most valuable "Coca" preparations—for the reason that the re-action incident to the use of this drug (solus) is entirely averted by its combination with Maltine. The preparation is largely used as an economizer of vital energy and as an aid to perfect assimilation of food. The manufacturers will send samples to any physician applying for same.

---

DUNCAN, FLOCKHART & CO'S. BLAUD PILL CAPSULES.—We are strongly of opinion that while medical men should be particularly guarded in giving testimony as to the merits of a preparation, there are occasions when their endorsement should not be withheld—and a word in favor of "D. & F." Capsules is one of the exceptions. In common with a very large percentage of the profession, we have fully tested these valuable Capsules, and freely endorse the opinion expressed by writer of subjoined letter:

"MESSRS. DUNCAN, FLOCKHART & CO.

"GENTLEMEN,—It is with much pleasure that I have to pay a tribute to your Capsules of Blaud Pills. I do not think I can do better than relate one of many cases I have treated solely with them.

"E. C., aged 23, suffered from extreme anæmia, with its attendant phenomena, for two years and nine months, and had been attended both in private and hospital practice, but with no result, and was gradually getting worse. At this stage she consulted me. I found that even the lips and gums were perfectly colorless, great œdema of the limbs, and the patient unable to move about. I put her upon one of your 3-pill Capsules three times daily. In a fortnight the whole of the œdema had disappeared, all palpitation had gone, and the patient told me that she had never felt so well. In six weeks she was quite well, and in perfect health. This occurred nearly twelve months ago, and I hear she is still quite well. The case is but one of a number, and I might mention, en passant, that I had a case of gastric ulceration which gave way to this treatment, having defied all other means. I feel justified in telling you that you can make use of this in any way you may feel disposed.

"Yours very faithfully,

"————, L.R.C.P., L.R.C.S."

---

BACK NUMBERS.—Carron Oil, Iodoform and Picric Acid are back numbers in the treatment of burns. Carron Oil possesses no antiseptic qualities whatever, while Iodoform, owing to its strong toxic effects and odor,

is very objectionable to the patient, and, in some cases, dangerous to use.

In regard to treating burns with Picric Acid, its disadvantages are: staining of the hands and bedclothes, and its utter uselessness in allaying the inflammation or assisting in granulation. Then again: Walther, in the *Gazette*, Hobdon de Medicine et de Chirurgical, reports a case of two children he treated for burns with compresses of Picric Acid, in which there was much pain, severe smarting, and vomiting. A second application was made, with same result, and this mode of dressing had to be discontinued.

In Unguentine we have a thoroughly antiseptic, healing and restorative dressing, non-toxic, inodorous and clean. It readily subdues inflammation, and assists in granulation, and was used in the hospital barracks at Key West, Florida, where the wounded soldiers of the "Maine" were sent for treatment from Havana.

---

CLINICAL NOTES ON GUAIAQUIN.—Messrs. McKesson & Robbins, New York, have recently issued an exceedingly handsome and valuable pamphlet with the above title, and will be glad to send it to all physicians who will ask for it. The work is very thorough, much thought and money having been spent upon it. It is profusely illustrated, and the colored plates, showing the various stages in the life history of the malarial parasites, will be found of much value, and are, we believe, the most complete that have been issued on this subject.

Malarial fever has resisted all but the most heroic treatment with quinine, showing that it is not so much an antipyretic as an antiseptic remedy which is needed. Guaiaquin is, therefore, of special value in this direction. Microscopical investigation of the blood of patients affected with malaria and treated with the guaiaquin shows that this remedy eliminates the plasmodium malariæ much more effectively than quinine. Physicians can readily confirm this statement by independent investigation.

---

THE GLEASON SANITARIUM—Located at Elmira, N.Y., is an institution to which physicians may send patients with the assurance that they will receive the best care.

The Sanitarium is beautifully located, and has the latest and most approved appliances for treatment.

The medical department is under the supervision of Dr. John C. Fisher, who was for some years in charge of the Warsaw, N.Y., "Salt Baths."

---

SANMETTO THE STANDARD PREPARATION FOR GENITO-URINARY DISEASES.—For some years I have been a very warm admirer of Sanmetto, and have found its action marked and well defined in the cases wherein I have used it. In cases of prostatis, with loss of virile power in elderly men, I find its action superb. In chronic specific urethritis, cystitis and all irritable conditions of the urinary tract, I find Sanmetto very efficacious. I do not hesitate to recommend it as a standard preparation in cases where the action of pure santal and saw-palmetto is indicated.

Durand, Mich. JOS. MARSHALL, M.D.

# The Canada Lancet.

VOL. XXX.] TORONTO, MAY, 1898. [No. 9.

## ORIGINAL ARTICLES AND COMMUNICATIONS.

We very much regret the omission of the name of the writer of the article in the April number—"The Present Status of the Radical Cure of Hernia." The paper is one read before the Ontario Medical Association, at its last meeting, by Dr. Geo. A. Bingham, Associate Professor of Surgery in Trinity Medical College, and Surgeon to St. Michael's Hospital and the Hospital for Sick Children, Toronto.

### REMARKS ON MODERN THERAPEUTICS.

Read before Ontario Medical Association June, 1897, by J. T. Fotheringham, Professor of Materia Medica, etc., Ontario College of Pharmacy: Lecturer in Therapeutics and in Clinical Medicine, Trinity Medical College, Toronto.

MR. PRESIDENT AND GENTLEMEN,—The term *Therapeutics*, as everyone knows, is by derivation extremely wide in application, and this breadth of meaning is apt to be lost to some of us by the bent that our study of drugs gives to our thinking. The Greek Θεραπος ("*therapos*") was the body-servant, the carrier of wraps and armour, with whom, in primitive society, the master lay for warmth on cold nights, as we are told the servants of King David suggested when he "was old and well-stricken in years," for they advised, "Let there be sought for my lord the king a young virgin, and let her stand before the king, and let her cherish him, and let her lie in thy bosom that my lord the king may get heat." The root idea is that in the cognate word Θερμος ("*thermos*")—heat, seen in the word thermometer. This surely directs our thoughts far enough from the beaten track, and compels us to recognize in the well-equipped therapeutist something else than a mere dispenser of drugs, more or less well-informed as to the proper uses of the agents he employs. We are reminded once more of that prince among physicians, Hippocrates, who, 500 years before Christ, had such luminous insight into the true function of the therapeutist that he wrote, as part of his first aphorism, thus: "The physician must be prepared not only to do what is necessary himself, but to make the public, the friends, and everything outside the patient, co-operate (in the cure)."

The reign of unmitigated empiricism could have lasted but a little while before such broad and scientific principles, had it not been that the

priest-physician was looked on as a thaumaturgist, a miracle-worker, as he is to this day in all uncivilized communities, and as, indeed, the skilled physician is still, by many of his patients, not one of whom will look on his efforts as being attempts to follow natural law and secure the amended working of natural but perverted processes by the use of natural means. The first thing for each one of us to do is to place as wide a gulf as possible between the public attitude to the medicine bottle and our own; to divest our minds entirely of the idea that some occult wonder-working power lies in any special formula or secret nostrum, whether we write it ourselves in a Latin prescription, or whether the Gold Cure Institute, or the Dodd's Medicine Co., or any other trafficker in the credulity and ignorance of the people seeks to gain advantage by it. The clear thinker who writes his prescription in due form and with due regard to the infinite variations of his patients' needs will, so far as in him lies, have cause and effect in view in every drug he uses, in every order he gives. And yet I would be far from saying anything to shake our faith in medicine well directed, or to minimize the very great value even of a pure *placebo*. We may modify our own faith in drugs and substitute other means of cure, or trust more intelligently to the *vis medicatrix naturae*, but we must take the laity as we find them, and, as a rule, the more ignorant they are of matters medical and surgical the better, at any rate in so far as that knowledge applies to abnormal states. The patient looks to his physician mainly, though not himself recognizing it, for moral support, and this will be always best administered through the mouth of a wonder-working mystical bottle.

The early promise of rational, as opposed to empiric, therapeutics, seen in Greek and Arabian medicine, was completely blighted by the superstitions that festered round the early Christian church, so that anatomy, and, of course, with it, physiology and pathology, but more especially that satanic black art, chemistry, lay smothered under the ban of the church for centuries. In due time, however, coincident, as Providence meant it to be, with the raising of that embargo and the gradual renaissance of reason as against blind faith, came the discovery of the Dutch investigator, Leeuwenhoek, and the first instrument to deal a deadly thrust at empiricism, and so introduce cause and effect into therapeutics, was the microscope. As is usual with all great inventions, it is the result of slow accretions, till now, with Abbé condenser, iris diaphragm, and all the rest of it, the modern pathologist comes to point the way to a new kingdom for the therapeutist to possess. I need not say to a gathering such as this that no single great advance in therapeutics has been made without a precedent gain in pathology, in more exact knowledge of the diseased condition. If we except the discovery of vaccination, due to Jenner's extraordinary clinical acumen, or the empirical use of quinine for malaria long before the discovery of the plasmodium, I think we may safely say that we owe the sum of our present knowledge mainly to the microscope. Ever since 1890 how enormously the field has widened—toxines, alexines, lysins, antitoxines, phagocytosis, immunity, serum-therapy; they are crowding us in in solid phalanx, or, rather, driving us out to scatter in broad generalizations over areas of thought that the old em-

piric attention to detail would have prevented our ever entering. As an instance of what I mean, I may refer to the work done up to date on the single subject of inflammation, so well summarized in Clifford Allbutt's system by Prof. Adami of McGill. What simplicity such generalizations import into treatment when one fully comprehends that the process in carbuncle, alveolar abscess, empyema, meningitis, acute osteomyelitis, gonorrhœal synovitis, is essentially one, and that variations in treatment are only variations in detail, from anatomical or special reasons, but not variations in principle. So that I think we can say that pathology is to the medical man what dogmatic theology is to the cleric, but more positive and settled and univer-al. It is the *sine qua non* for a scientific practitioner, the only safeguard against the pernicious heresies of Homeopathy, Faith-cure, Christian Science, and all the other fallacies that spring from the *post hoc ergo propter hoc* style of reasoning—"after this, therefore, because of this"—that pitfall ever open for the feet even of the best of us.

This gain in knowledge all along the line has led, I think, to a general unwillingness to admit that one's whole duty is done when he has seen the patient regularly dosed from a bottle. I feel sure that the teachings of the past few years have made us more anxious than formerly to take full advantage of remedial measures other than drugs—such as, hydrotherapy, diet scientifically controlled, massage and Swedish movements, even electricity (though I hesitate to mention it as a remedial agent), the rest-cure, exercise, for instance in such cases as crippled heart, or pelvic disorder in women; in short, as Clifford Allbutt, in the work already referred to, poetically puts it, we are coming to "see how dominant is the sphere of preventive medicine, and that curative medicine is often but the ancillary mouse which liberates the body for its own work of recovery."

The second important influence at work in modifying our modern therapeusis is not physical as the microscope is, but chemical, and affects our methods by the change it has wrought in the forms that our drugs take. Modern chemistry and pharmacy have gone hand-in-hand to provide us with "proximate principles," as they are called, alkaloids and glucosides from the organic *materia medica* as well as purer and more elegant inorganic preparations, till the old idea of the "apothecary in tattered weeds, culling of simples," has pretty well vanished from the public as well as the professional mind.

While acknowledging at this point the undoubted advantages to the profession arising from the enterprise and genuine scientific ardor of many of the manufacturing concerns and drug-houses, large and small, on this continent and abroad, I would beg leave, emphatically, to warn my *confreres* against the enthusiasm with which these people vend their wares. I wish not to make too sweeping a statement, but we all know how much we can learn from some of the glib and aggressive "drummers," if we put our mind to it, and sit down to listen in due humility. None of us, for instance, can afford to neglect their assurances with regard to some elegantly-prepared farinaceous food, that it is equally well suited to a six weeks' old infant and to a six years' old child.

The use of tablet triturates, pills, and the modern elixirs, cordials,

syrups, etc., in place of the old-fashioned mixtures, so often nauseous, and loaded with inert matters, is a great advantage, but only if its limitations are properly understood. In only a few instances does the active principle represent the whole therapeutic value of the plant. Pilocarpine is the full therapeutic equivalent of jaborandi, pelletierine of pomegranate bark, sparteine of broomtops, emetine of ipecac (as an emetic), and physostigmine of calabar bean. But strychnine does not, without brucine, represent nux vomica; nor as a simple tonic, quinine, cinchona bark; nor cocaine, coca extract; nor digitaline the infusion of the digitalis leaf. And opium is not represented by morphine, nor even by an artificial combination, as nearly correct in proportion as possible of its various constituents. Much disappointment will be saved if we remember these facts, and while we must meet the public half way in their clamor for palatable medication, we must be conservative, for we are egged on by both public and manufacturers to an extreme just the opposite to that practised in the good old days of huge and nauseating doses. Here, as in everything else, let us try to cultivate suspicion of the extremist, and to observe the "golden mean," the middle place to which our training as medical men leads us as no other men are led, unless it be the trained diplomatist, who habitually satisfies himself with the best possible, though it be not the theoretically best.

And while on this subject I beg your kind assent when I strongly urge that the more closely we adhere to the tried and trusted pharmacopœial preparations, the more intelligent and creditable will be our therapeutic efforts. I have already acknowledged the indebtedness of the profession to the pharmacist, and having done so, wish to express marked deprecation of the growing habit of prescribing proprietary elixirs, syrups, pills, &c., &c., to the exclusion of the pharmacopœia We sometimes complain, and very often with good reason, of the way in which the retail druggist treats us. I am certain that one reason, among others, is that he is being slowly and surely driven to the wall by the concentration of business among half-a-dozen large firms, and we do our share in driving him to the wall when we specify a pill or a syrup in an extract from some special house, which costs him so much to buy that he makes no living profit in the sale of it, while he can himself make an equally good preparation at perhaps one quarter the cost. I very much doubt if Sanmetto, and Arsenauro, and Aseptolin, and Antikamnia, *et hoc genus omne*, are one whit better than their pharmacopœial congeners, and I very much fear that the man who habitually prescribes such compounds is in the habit of writing a "shot gun" prescription, and sights his gun with both eyes shut.

Another therapeutic tendency of our day, the third which I would mention, is largely the result of the minute and accurate subdivision of doses made possible by the use of active principles. It is the tendency towards smaller doses and greater frequency. The homœopathic school claim this as their specialty and tell us that we are a poor set of imitators, nor indeed in this only, but in nearly all of the changes made by scientific medicine in recent years. Here again the truth lies in the midst, error at either extreme. There are cases in which frequency and

small doses are much the best *e., g.*, in the use of aconite or veratrum viride in the sthenic stage of an acute fever, *e. g.*, pneumonia, in which by causing widespread peripheral dilatation of the capillaries, the blood-stream to the dilated and paralyzed capillaries of the congested lung is slowed and the area of coming consolidation probably diminished. When the effect aimed at is to be steady and continuous, and the drug is rapidly exereted or otherwise evanescent in action, as Nitro-glycerine or any nitrite, or hydrocyanic acid, the wise physician will order it often and in small doses. But to apply this principle to the Soporifics, or to Arsenic and Iron in the treatment of chlorosis, would be to act apart from reason. As well adopt the principle in the administration of food ; and herein lies the error of the Dosimetric system, one of the latest competitors for the favor of the profession, born of trade exigencies, pushed by a firm which seek to monopolize thereby the trade in a particular form of triturate, and only another "ism," quite as pernicious in kind, though not in degree, as the worst of them.

A fourth and most interesting departure of modern days is the idea of Serum-Therapy, and as this subject has been introduced and discussed in such timely and scholarly fashion by Drs. Davison and MacMahon, I shall content myself with simply mentioning it.

Closely allied to this method of treatment is that of the use of animal extracts. Of course the idea is a very old one, and only within the past few years has it been placed on a reasonable physiological footing. We are now quite prepared by our knowledge of physiology and chemistry to believe *a priori* that a carefully-made extract of a glandular structure may contain enough of the ferments and secretions peculiar to itself to be of service where they are wanting in diseased conditions. This theory has been *a posteriori* proven abundantly with regard to such animal extractives as pepsin, pancreatin and thyreoidin. Extract of red bone marrow is on trial, with evidence in its favor, and the extract of the supra-renal bodies has recently been used in Addison's disease, with distinct advantage claimed for it. (See Byrom Bramwell's lectures on two cases in *B. M. J.*, Jan., '97).

Some physiologists are now claiming that every organ of the body is glandular in the sense that they all pour into the blood something necessary for its normal condition as blood. Especially is this claimed by some for the kidneys, as partial extirpation in dogs, while accompanied by excessive flow of urine, the result probably of vascular change, causes death, not with purely uræmic symptoms, but rather, as these observers say, from absence of some normal ingredient in the blood derived from the kidney. Be this as it may, we may receive with absolute skepticism statements of the value of glycerine extracts of heart, cord, brain, muscle, etc., etc., sold under the names of cardine, ovarine, testine, cerebrine, and so on *ad nauseam*. They are absolutely useless, except as arousing the "expectant attention" of the patient, usually a neurasthenic, and therefore apt to be only functionally deranged. They act as purely by "suggestion" as does hypnotism in hysteria, and can equally well, in all likelihood, be prepared from fresh eggs as from the various organs of sheep and cattle. Of course I need scarcely point out that Pasteur's

original method of injecting the victim of rabies with an emulsion of the spinal cord of an animal dead from that infection is quite a different matter. The toxin of a diseased tissue, employed to secure immunity against the same disease in another animal, is a very different thing from the imaginary specific secretion peculiar to a non-glandular portion of the body.

One of the oddest and most bare-faced frauds of this kind that I ever read I came across not very long ago in a homeopathic text-book. The author claimed to have cured certain lung affections in the shortest possible order by giving grain doses of a one in one hundred trituration of dried fox's lung in sugar of milk. He attributed his success to the fact that he had carefully dried the fox's lung without heat, as any degree of heat would have destroyed the *pulmonic acid* (!) which exists so abundantly in the lungs of all animals which can run a long time without getting short of breath. One is at a loss which to admire the more in such a therapeutist—his ignorance of the first principles of the physiology of respiration and everything else pertaining to medicine, or his impudence in stealing an old idea, and, after re-vamping it a bit, passing it off as his own. He took it from the old Greek physicians, who used to feed their tuberculous and asthmatic patients on boiled fox-lung because that animal, as they put it, had "a strong respiration."

In conclusion, gentlemen, I think that by occasionally looking to our ideals, by trying to elicit cardinal principles from the dust heap of details, by setting our professional house once in a while in order, we do ourselves much service. This is why I have avoided drugs as my topic, and have tried to gather together a few thoughts on the broad general movements in our modern therapeusis. More particularly I wish to note once more the general recognition by the profession of the fact that overdrugging has occurred in the past, and is an error, and that without becoming in the process a therapeutic Nihilist, or Agnostic, or *doctrinaire*, the later physician sees perhaps more fully than did his predecessors that his duty lies mainly in setting things in train for his patient, that Nature may work as far as possible unhindered.

---

## NOTES OF A RARE CASE OF INTERSTITIAL NEPHRITIS PRESENTED TO THE OTTAWA MEDICAL SOCIETY,

By ALFRED J. HORSEY, M.D., M.R.C.S. Eng., L.R.C.P. Edin.
Ophthalmic Surgeon to St. Luke's Hospital.

MR. PRESIDENT AND GENTLEMEN,—With your permission, I would like to add a further communication to this Society relating to the case of the young man, aged 22 years, a specimen of whose urine was shown to this Society two meetings ago, and which contained the enormous quantity of about 80% of albumen, and whose sight was much impaired by retinitis of a disintegrating character, with numerous hemorrhages,

*all* of which was amply shown by the ophthalmoscope—and which was dependent upon albuminuria—making the prognosis very grave.

I am sorry to inform you that he is already dead, fulfilling the prognostication even earlier than was thought, though the case was regarded as extremely acute. Some of you may remember that it was stated at the time of the first communication that he came to see me in a casual sort of a way to know why his sight was "blurred," which he had noticed failing for only a week, yet it had declined to $\frac{1}{5}$ and $\frac{1}{6}$ from normal in the right and left eyes respectively.

He was at the time following his usual vocation, that of a valet or waiter, at indoor work, and was quite ignorant of any disease in his kidneys or in his eyes, as he had few symptoms of ill-health excepting a delicate stomach, occasional vomiting and shortness of breath on exertion, and none which he referred to his urinary organs. The second sound of his heart was accentuated. There was arterial tension and sclerosis of the arteries. He had a year ago derangement of the stomach, for which he sought medical advice, but his vision was not then affected.

This was thought to have passed away, and he continued on duty until he came to consult me on January 7th, 1898. No doubt his illness dates from, if not prior to, this time.

He, much to my regret, passed out of my observation into hospital.

His course there was an exceedingly rapid and retrograding one, terminating on January 25th, or in 18 days after consulting me, the chief and most distressing symptom being dyspœa; so extreme was it that for several days before his death he was unable to lie down, due most probably to the toxic influence of urea in his system.

The case is an uncommon one in several respects.

1st. The occurrence of interstitial nephritis which we, in the absence of a p.m. may reasonably regard it, as in the few similar cases recorded where p.m.'s have been made, interstitial and not glomerular nephritis had been found. No casts of any kind were seen in the urine. The urine retained its normal acidity, specific gravity, and quantity, but was highly albuminous throughout. It was remarkable to find renal disease in one so young, who had a good family history, was strictly temperate as regards spirits, but was a hearty eater, never that he remembers having had scarlet fever, rheumatism, or cardiac trouble.

2nd. Its insidious onset and rapid, fatal course. It demonstrates the usefulness of routine ophthalmoscopic examination in obscure medical and surgical cases; also the value of testing of the urine.

It is not enough to have the patient make no complaint about his sight, nor should it satisfy that he declares there is nothing wrong with it. There may be the gravest manifestations in the eye, even in the retina, without impairing vision, when it is situated in a peripheral part distant from the macula lutea.

In the *Ophthalmic Review* of November last is reported a case much resembling the foregoing one, in a girl of 12 years. And in the discussion that followed, Mr. Nettleship, Mr. Lawford and Mr. Spicer could each recall one somewhat similar case occurring in the course of their practices, showing that even in the great medical centres such cases are rare.

CASE II.

It may not be irrelevant to mention another general condition which was brought to light by the microscope, viz., Diabetes.

Mrs. W., widow, age 70, consulted me because of her glasses not suiting her as they once did.

Her vision was found to be $\frac{20}{200}$ in the right and $\frac{1}{200}$ in the left eye for distance.

The right was improved to $\frac{20}{30}$ by — 10 sph. The left could not be improved by glasses. There was a history of amblyopia in the left.

OPHTHALMOSCOPE.—The right fundus and disc could be seen, with retraction of the choroid away from the disc, forming a large staphyloma. The vitreous was not turbid, but fluid, in which there floated large dark, coarse opacities.

The left fundus could not be seen, owing to turbid vitreous, which also contained similar opacities as seen in the right.

As Sir William Gowers observes that opacities in the vitreous are frequently associated with diabetes, which are produced by the escape of blood in small quantities from the retinal hemorrhages, the urine, at my suggestion, was examined by her medical adviser, when it was found to be of high specific gravity, and contained sugar, making the second recent case in which the ophthalmoscope was the means of detecting a general disease.

---

GONORRHEISM.—Schuster (*Journ. de Med.*), physician at the sulphur baths of Aix-la-Chapelle, details some observations drawn from a large experience in the treatment of gonorrheal affections. It is generally supposed that gonorrheal arthritis, iritis, pericarditis, inflammation of tendon-sheaths, etc., are caused by the entrance of the toxins of the gonococcus into the circulation, but Schuster emphasizes the possibility of the migration of the gonococcus itself. Affections of the calcaneum, inferior maxilla tibia, and sterno-clavicular articulation are usually considered syphilitic, particularly if they yield to treatment with mercury and the iodides; but Schuster has effected cures by mercurial treatment in cases of this character that have never had syphilis, and which he believes to be purely gonorrheal. Inunction or the subcutaneous injection of corrosive sublimate in conjunction with hot baths (39° to 40° C.) is favorably spoken of. Schuster had already demonstrated by his own observations at the baths of Aix-la-Chapelle that the temperature in the rectum rises; during a bath at 39°-40° C. to a like height, and as the gonococcus is destroyed by such a temperature, he believes in the specific effect of the bath in the treatment of gonnorrheal affections. Care is advised in the use of the hot bath in cases of endocarditis. Immobilization and injection of iodoform glycerin are recommended in articular affections. Gleet, when present, must be treated preferably by medicated irrigations.

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

## FULMINATING APPENDICITIS.

BY HOWARD CRUTCHER, M.D., CHICAGO.

By the term fulminating appendicitis, I mean that condition where a more or less gangrenous vermiform process ruptures and permits infectious elements to escape into an unprotected peritoneal cavity. This definition is not thus applied by many with whom I have communicated. Some classify all cases of perforation as fulminating; others use the term in connection with the rupture of protective adhesions, allowing the escape of infectious matter; and another class denominate the case as fulminating when the onset is violent and sudden, regardless of the pathological lesion in the appendix. This confusion of terms has made it impracticable to gather precise information concerning a condition which all clearly recognize as appalling.

The absurd injunction of a professed expert in diseases of children that "Surgeons should learn to differentiate between appendical conditions which experience has proven will yield to medical treatment, and resort to operation *only in fulminating* cases," led me to make some enquiries among practical men of authority concerning the condition so happily disposed of by a theoretic pen.

My investigation covered two practical points, which may be put in the form of interrogatories:

First: Do you know of any ordinary means by which perforation can be foretold?

Second: What have been your results in fulminating appendicitis?

Maurice Richardson, of Boston, says, very truly, that "one difficulty in writing on appendicitis * * * is in getting the definitions right, so that all will mean the same thing. Now, I define as a fulminating case of appendicitis one of general peritonitis, a case from which there is a rapid extravasation from a perforated and gangrenous appendix; an extravasation which in the course of a few hours infects the whole peritoneal cavity."

Dr. Richardson's definition, with slight modification, expresses precisely what I understand fulminating appendicitis to be. The "general peri-

tonitis" must be regarded as a complication of the other condition. All cases of circumscribed appendicular abscess can be eliminated at the outset; nor can the rupture of such an abscess into the general cavity be classified as fulminating appendicitis.

Richardson observes further: "I do not think that such cases recover except by the merest chance. It is what I call a 'fluke' when they do get well. * * * That is to say, a case in which the abdomen is distended, the action of the intestines paralyzed, and the patient vomiting. * * * I have yet to see any case of this kind get well. I have known patients with a distended abdomen get well. The distention in such cases is not the distention due to intestinal paresis, but the distention from retained fluids and gases. I do not believe that acute general peritonitis, starting from the extravasation of intestinal contents, gets well often enough to encourage us to operate in such cases. I am not sure that I am not willing to go so far as to say that the patient's chances of recovery are quite as good when they are let alone as when they are operated upon. Such cases are so hopeless, the system is so saturated with the ptomaines of germ growth, that the slightest manipulation is fatal. * * * I do not think there is any way of telling in the first hours of an appendicitis what course the disease will take, whether the process will be limited to the neighborhood of the appendix, or whether it will extend throughout the whole abdominal cavity. At the end of forty-eight hours I do think one can tell with reasonable certainty, though not always. * * * Probably a bad case will show to the experienced eye its grave nature in the very beginning. I always operate in cases of severe pain, cases in which there is a rigid abdomen, or in which there is evidence of localized pus. I also operate in the early hours of general infection."

Dr. Charles B. Nancrede says that he "knows of no ordinary means whereby perforation may be foretold;" that he has often been mistaken as to its presence and its absence in cases verified by operation.

Bernays, whose experience in appendicitis has been very extensive, has no doubt that most of his deaths in this disease resulted from fulminating cases as I define them. He says: "In this variety, unless the operation is done promptly, within a few hours after the perforation, and unless very extensive gauze drainage is made, death will invariably follow. * * * Operation should be done in *every case as soon as possible after the diagnosis is made.*"

Dr. A. M. Cartledge, of Louisville, basing his observation upon two hundred cases of appendicitis, seventy of which were subjected to operation, attaches more importance to the *severity* of the pain in the *initial* stage than to the other features of the case. I am able to confirm this observation of Dr. Cartledge touching the *fact* of perforation in these violently painful cases, yet but one of my cases was of the fulminating type, the others being cases of circumscribed abscess One case may be cited: A woman of twenty-three, without substantial warning, fell to the floor from a violent pain in the abdomen. Great shock was present. After two weeks of pain, fever, thirst and vomiting, I opened a foul abscess cavity, the patient making a rapid recovery.

Frederic S. Dennis is guided by the pulse more than by any other symptom. Where the attack comes on: "with great suddenness, associated with profound collapse at the beginning, with a rapid pulse," he operates "to avert perforation," whereas my experience is that these symptoms are almost invariably due to perforation itself.

Morris says: "There are certainly no means by which perforation of the appendix can be foretold. In fact, I *very often* find a perforated appendix walled in in cases in which the symptoms are all local, and not very severe at that."

Murphy, of Chicago, has not seen a case of fulminating appendicitis in two years. He adds: "Whether it has been due to my good fortune or whether it is due to the fact that I operate so very early I cannot tell. I know of no means of foretelling a perforation. A very large percentage of appendices are perforated within forty-eight hours after the onset of the symptoms." When we consider Murphy's great experience in appendicitis, the statment that he has seen no fulminating case in two years seems remarkable, unless taken in connection with the fact that "very early operation is his invariable rule.

Dr. John A. Wyeth knows of no symptoms that clearly foretell perforation. "They *pile up after* the explo-ion," says Dr. Wyeth, "but in gangrene the *pain* is not reliable. The symptoms of shock are nearly always observable. The anxious look, the disappearance of facial lines, the early vomiting, the thoracic respiration, the rising pulse and temperature are plain enough, but there is nothing to foretell all of these."

Roswell Park "does not know of any means by which appendiceal perforation can be foretold with certainty. In fulminating cases—to which you would limit the enquiry—I hate to let perforation become so imminent. Nevertheless, I regard the drawn, pinched face, the approaching collapse, the general appearance of septic intoxication, as evidence that it either has happened or soon will happen. This holds good often with regard to sudden relief or shifting pain."

Matas, of New Orleans, has seen but two cases of true fulminating appendicitis. "Both cases were seen in full coliapse and were inoperable."

Concerning the matter of foretelling perforation by ordinary means, Dr. Matas says: "I do not know, if we exclude that *indefinite* clinical perception which long experience at the bedside gives to the clinician. We cannot depend either upon the acuteness of the symptoms or their mildness; sometimes we think the danger is not imminent; yet we are deceived; at other times, when we are most confident of the result the mischief is done. Logically, the only certainty lies in direct inspection of the appendix after-section. I believe the success in non-operative cases depends more on the fortune of circumstances and the large number of cases that terminate favorably without perforation than upon any clear and rational means of differentiating cases. If the surgeon will not accept as a general rule the dictum of Murphy, Deaver, and others, that is, to operate upon every case regardless of its *apparent* type, he must be prepared to take his chances as to perforation and be prepared to act instantly the moment the danger is recognized, when he will probably be too late, or he may possibly save his patient, as we sometimes do in typhoid."

It will be seen from the testimony of the distinguished surgeons named above that we cannot possibly foretell perforation by ordinary means. The course of the disease after perforation depends upon the measures devised by nature for limiting the infection. If the diseased process is located, as happily it so often is, where limiting adhesions are practicable, then we have an abscess to deal with; if the gangrenous tube be so located that natural prophylaxis be impossible, the case comes properly within the fulminating variety.

My personal experience with fulminating appendicitis is quite limited. A few cases have been saved, but the operation was performed within a few hours after the onset. Of the cases so graphically described by Richardson, not one has recovered. The cardinal feature of my experience is, that in no case of the kind under consideration has the probable diagnosis been correct. One case will fairly illustrate the others: A boy of nineteen complained for three or four days of general abdominal distress; it was so mild that a physician's advice was not thought to be necessary; the pulse was 84, temperature, 99°; and the patient was sleeping so quietly and restfully that he was indignant when I aroused him. The distention was slight, the muscular tension hardly decisive. There were no other symptoms of consequence, aside from moderate pain upon pressure over the cæcal area. It is doubtful if one careful physician in twenty would have called in serious question the facial expression. A few days before he felt "rather knocked out" for a few hours—symptoms of shock. Following that indefinable clinical instinct so admirably pictured by Matas, an exploratory laparotomy was advised, assuring my colleague that we should likely find a small abscess, basing this opinion upon the undoubted symptoms of shock. Instead of this, a typical fulminating appendix was found—a ragged slough perfectly loose in the cavity. General peritonitis had already begun, and no amount of treatment stayed its march for a moment.

In another case, a man of thirty-four, who had been treated for "chronic dyspepsia," was taken with sudden faintness while at his desk. He went home, took some whiskey, and felt so much better that no physician was called. This was on Thursday. On Friday there was some vomiting. The next day a physician was called, but no alarm was felt until Sunday morning, when I was summoned. The signs of local peritonitis were present, but general involvement of the peritoneum was thought to be improbable. Pus and fecal matter were found all over the abdomen, confined in some regions by cobweb adhesions. A free appendix, six inches long, gangrenous from one end to the other, was found to contain several perforations. Death promptly followed general peritonitis.

The few recoveries were due solely to exploratory laparotomies, undertaken for the purpose of forestalling a perforation, and in no case because fulmination had been suspected. A moderate delay would have transferred all these cases to the hopeless column.

I believe *shock* to be the most reliable guide in appendicitis; in fact, we have learned that pain, pulse, temperature, etc., are not accurate enough to be scientifically classified. In no case ought the significance of shock to be ignored. A nervous temperament may exaggerate the pain

and unduly accelerate the pulse, but shock tells a pretty accurate story and its meaning in appendicitis cannot be mistaken.

Unfortunately, in many cases the landmarks of shock are too obscure to afford much help in reaching a conclusion.

A violent onset, where the pain is wrenching and overpowering, is a pretty sure indication of perforation, present or impending; but we can tell nothing from this as to the condition of the natural defences. I have many times operated in such cases to find a perfectly safe wall of limitation. At other times I have removed a gangrenous, pus-laden appendix, undoubtedly on the verge of perforation, without the faintest trace of peritoneal infection about it, and hence no protecting adhesions around it. Of course, when such a condition is found it is quite natural to infer that we have forestalled a fulmination, and yet I am not ready to admit as much. The appendix does not, certainly, go to pieces at once, as a rule, and we must conclude that nature prevents numberless fulminations by throttling the first speck of infection that crosses the line, and hurrying the mass to some convenient corner where her saving processes can be more surely carried out. In a few instances I have found a gangrenous appendix safely wrapped in the folds of the omentum, which was attached only around the point of infection and not adherent to other viscera.

From the testimony thus far presented, it does not appear that the diagnosis of fulmination is a practical question. The symptoms of general peritonitis are clear enough, but who has any faith in operation under such circumstances? I have diagnosed fulminating appendicitis without operation, but the diagnosis was clear only because of the hopelessness of the case. A diagnosis that must be confirmed by post-mortem examination is not of much value to the patient.

Touching this point, Murphy says:

"I fully agree with you in your opinion about *not* operating in cases of fulminating appendicitis."

In short, when fulminating appendicitis is diagnosed, it is worse than useless to operate.

My belief is that early operation has done more to eliminate fulmination than many are ready to believe. This point was well covered by a gentleman to whom I apologized for my serious apprehension concerning his appendix before operation, when it was demonstrated that perforation was not at all imminent. He joyfully rejoined: "You found no gangrene, no pus, nothing likely to kill me—what are you grumbling about?" I have never grumbled since on finding conditions so favorable to life.

Appendicitis is a most deceptive malady. It is not a question that ought to be decided by the whims of individuals, nor can the burden of our ignorance be thrown upon much-enduring nature. That a case recovers is nothing; that one dies is nothing; but it is vital to know what kind of cases die and what kind recover. The pathologist has about completed his labors in this field. The question with me is, when *not* to operate, and the burden of proof is upon those who oppose immediate surgical relief.

In conclusion, the following statements seem to be warranted:

*Pain.*—If violent, sudden and persistent, it indicates probable seriousness of the attack, but indicates nothing as to the natural defences for limiting infection. On the contrary, absence of pain is undecisive between gangrene and resolution.

*Pulse and Temperature.*—While a rapid pulse and high temperature favor the destructive process, their absence is no assurance of recovery. Referring to this, Tyson remarks that *too much stress cannot be laid upon the fact that there may be gangrenous appendicitis in the presence of normal temperature.*

*Shock.*—The presence of shock, if undoubted, is a very grave symptom, generally indicating perforation. On the contrary, the most deadly attacks often occur without it.

*Sensitiveness.*—If persistent and highly developed, generally indicates destructive inflammation, but gives no clue concerning the limitations of infection.

*The Expression.*—Of no material value before the development of grave conditions.

*Perforation.*—This can no more be foretold than the perforation of typhoid or the rupture of an aneurism.

My own practice is to save the patient first, by operating upon non-septic tissues, if possible, and to argue the case afterward.

To the well-known gentlemen who have so generously and frankly responded to my requests for information, I beg to tender my sincere gratitude.

103 State Street.

---

## THE DIAGNOSTIC AND THERAPEUTIC VALUE OF "LUMBAR PUNCTURE."

From January, 1895, to the end of June, 1897, I have performed 21 "punctions" in the lumbar region, anticipating assistance in diagnosis as well as therapeutic relief. In 15 of the cases the symptomatic phenomena of meningitis basilaris tuberculosa were unmistakably marked; five were typical cases of meningitis cerebro-spinalis epidemicæ, while one was of hydrocephalus acutus, resulting from meningitis cerebro-spinalis.

In the 15 cases of meningitis basilaris tuberculosa the puncture was performed at an early stage of the disease as well as when the cerebral tension was well advanced. In two cases puncture was only performed once; in eight cases it was performed twice on each subject; in three cases it was performed three times on each; and in two, four times on each subject.

The quantity of fluid abstracted at each individual operation varied in the early cases from 5—10 to 20 cubic centimetres=0.1760 of an ounce to 0.7040. In older cases it ranged from 20 to 50 cubic centimetres—in one case it was as much as 115cc.=4,048 ounces of fluid. The total quantity from each case varied in the same degrees.

The first two cases, tapped once, gave 15 and 30 cc. respectively; the eighth, with two tappings each, gave: one 20 cc., one 25 cc., one 50 cc.,

two 35 cc., two 65 cc., and one case gave 75 cc., respectively. In the two cases, with four tappings, the quantity abstracted was 150 and 215 = 5.280 and 7.568 ounces.

In all the cases operated on not a single untoward symptom arose to mar the effects of the operation, but it need not be added that scrupulous care was exercised in disinfecting the surroundings and using aseptic instruments. Again, aspiration was carefully avoided and the fluid allowed to drip out gradually by gravitation. When the tension in the cerebral membranes was high the fluid rushed out with considerable force. In many of the cases the fluid obtained was of a clear, watery appearance, without any sediment, and no tubercle bacilli could be discovered by the ordinary methods of investigation.

In one case the fluid was tinged red, while the soft parts were deeply-colored red. The contents of a Pravatz syringe of this cerebro-spinal fluid were injected into the peritoneum of a guinea-pig, whose temperature rose to 38 c. = 100.4 degs. Fahr., but gradually fell in a few days to normal without any bad effect. In the course of four weeks the animal was killed, but no trace of any tuberculous affection could be discovered. This operation was performed in two different cases, with the same result.

The influence of the tapping on the disease was not constant in its effects. It may be safely averred generally that it did not markedly affect the pressure-phenomena of the disease. In several cases, after a sufficient quantity of fluid had been withdrawn, a temporary relaxation of the contractions occurred, followed by a short period of somnolence, which disappeared after 24 hours, without leaving any notable improvement in the patient. It may not be without interest to mention a few changes that took place in the temperature after tapping, but these were not constant. In one series of the cases, the temperature ranged between 39 and 40 c. = 102. 104 degs. F., which was suddenly induced by the operation. This did not always occur in the first tapping, but would appear on the second, third, or fourth, for the first time, which was usually transitory, and would disappear within 24 hours after its first appearance.

The therapeutic results of my own experiments convince me that no permanent benefit is obtained from tapping. There is only one case that could be demonstrated as a positive success, which proportion is far too small for the magnitude of the operation. A few temporary ameliorations in the symptoms were undeniable, but these were not lasting enough to justify such interference. As a diagnostic test the operation utterly failed in my hands, as nothing could be obtained from the fluids of animals after death to prove the presence of tuberculous bacilli, although the post-mortem of the patients in every case revealed the bacilli of meningitis tuberculosæ.

In five recent cases of meningitis cerebro-spinalis epidemicæ, I operated with only one success as a diagnostic aid. In this case the fluid withdrawn amounted to 10 cc., cloudy in appearance, containing pus cells and producing a capsuled cocci on cultivation. The post-mortem confirmed the diagnosis.

1. Tapping, as a diagnostic or therapeutic adjunct is quite worthless, according to my own experiments; but it must be borne in mind that other investigators have discovered proof positive in the cerebro-spinal fluid of the tuberculous bacillus, as well as cultivation in other animals, to justify the assertion that it is constantly present. My own opinion is that a negative result does not destroy a positive clinical diagnosis.

2. In acute cases of meningitis cerebro-spinalis the cerebral fluid does contain morbid products, which, if applied to animals, as Heubner has shown, may serve to verify clinical observation.

3. When the acute stage has been passed, and hydrocephalus is present, no diagnostic assistance can be obtained from the examination of the fluid.

4. As a therapeutic agent it is equally inefficacious in meningitis cerebro-spinalis and meningitis tuberculosæ. I must qualify this by saying that individual cases do improve when operated on early, often repeated, and large quantities abstracted. I recollect one in private practice of two months' standing that improved after each tapping, but ultimately died after three days' illness.

5. My operative experiments are not sufficiently large in meningitis, chronic hydrocephalus, or chronic hydrocephalus in connection with tumors, to justify a critical record of their worth.

6. Further experiments are necessary to determine the quantity of fluid to be abstracted, the interval of time that should elapse between the operations, and how far the therapeutic value, if any, can be demonstrated.—DR. MONT, *Med. Press.*

---

## TREATMENT OF ACUTE PROLAPSUS ANI.

Acute prolapsus ani occurs frequently at childbirth, but as the patient has to keep her bed irrespective of the anal trouble the condition does not assume so much importance as when the sufferer is an active man of business, to whom the time and rest necessary for recovery are serious matters. A succession of these acute cases in many respects similar led me to adopt a treatment which has given encouraging results. The pathology of the condition appears to be a slipping or forcing down of the mucous membrane investing the sphincter and of the mucous membrane immediately above it. Spasm of the sphincters, impeded venous return, and edema result in the formation of an elastic and exceedingly tender, livid or purple swelling occupying either a portion or the whole of the circumference of the anal aperture.

The swelling can be returned above the sphincter without much difficulty by the finger, but in the course of a few minutes in many cases the prolapsus has recurred. The application of heat or of cold in the form of an ice compress relieves the discomfort, but does not effect a cure or materially alter the size of the swelling. Astringents, either in the form of an ointment or of suppositories, I have found to be useless. Regulation of the bowels and the recumbent position are necessary, but a week often passes before nature brings about recovery.

It is obvious that if the prolapsus could be kept up for a few hours a

speedy cure might be anticipated, and this led me to employ pads and a T bandage, but it was almost impossible to prevent the descent of a small swelling in this way owing to the awkward situation in the hollow of the buttocks. Under these circumstances, and in the absence of thrombosis, which would call for incision, I have successfully used as a pessary a full-sized Tait's cervical dilator. After replacing the prolapsus with the finger the vulcanite uterine dilator is lubricated and inserted for one inch up the rectum, and is retained in position by a collar of dentists' wax (Stent's composition) supported by cotton wool and a firmly-applied T bandage.

The pessary not only prevents a descent of the swelling while in position, but by its pressure it favors the absorption of the edema, and it empties the engorged veins; it should be inserted at night and retained until the following morning. This treatment I have found to bring about a complete cure; there has been no tendency to relapse, and the patient has been able to rise and resume his occupation without discomfort. Olive-shaped pewter pessaries have been used for this purpose, but they are dependent for their position and retention upon the action of the sphincters which cannot be relied upon in these cases. In the chronic condition of prolapsus ani arising from atony of the levator and sphincter ani muscles much benefit cannot be expected from treatment by pessary.

The following case was the first one treated by me in this way. June 22, 1897, a man complained that for two days he had been in pain from a swelling which he took to be a hemorrhoid. On examination a tense, bluish, semi-lunar swelling was found occupying the right margin of the anus, the mucous membrane being continuous with the skin at the outer circumference. The patient stated that he had pushed up the swelling repeatedly, but that it always returned in a few minutes. This I found to be the case. I then gave him a full-sized Tait's dilator 2¾ in. long, and ¾ in. in greatest diameter, and conical in shape, for which a collar was made as described above so as to grasp the pessary thus improvised at one inch from its point and prevent it from slipping entirely into the bowel. The patient was directed to return the prolapse when in bed, and immediately to insert the pessary well lubricated and supported by a T bandage; he was also strongly advised to remain in bed on the following day until seen by me. Next morning, however, I received a note to the effect that he felt quite recovered, and I heard afterwards that the pessary was worn until 4 a.m., when it slipped out, but the prolapse did not show any tendency to return, and has not done so up to the present time. —Frank Elvy, M.R.C.S. Eng., *London Lancet.*

---

*Local Treatment of Gout.*—

Potassium iodide, 4 drachms.
Soap liniment, 4 drachms.
Cajuput oil, 30 minims.
Caraway oil, 30 minims.
Rectified spirit, sufficient to make 7 ounces.

Apply on lint and cover with protective. —*Medical Record.*

# MEDICINE.

IN CHARGE OF
N. A. POWELL, M.D.,
Professor of Medical Jurisprudence and Lecturer on Clinical Surgery, Trinity Medical College; Surgeon to the Hospital for Sick Children, and to the Extern Department Toronto General Hospital; Professor of Surgery, Ontario Medical College for Women. 167 College St.; and
WILLIAM BRITTON, M.D., 17 Isabella Street.

## APPENDICITIS.

### SYMPTOMS WHICH DETERMINE THE SAFETY OF POSTPONING OPERATIVE INTERFERENCE UNTIL THE ACUTE STAGE HAS PASSED.

When we remember that fully one-half of all the cases of appendicitis recover from the first attack; that spontaneous resolution takes place when peritonitis, exudation, and sometimes even suppuration, have been present; and that a large number of cases which recover withont an operation in the primary attack remain well and have no recurrence of the disease, the question of when to operate or not to operate is a very nice, difficult, and always an important one.

I agree with Wyeth, that if you have a competent surgeon, one skilled in abdominal work, and the patient can be operated on within twelve hours of the first symptoms of the attack, ninety-nine per cent. will be cured. But we frequently see the cases after these twelve hours have expired, and surgeons of experience in such work are not always within call. I confess I am not in favor of an operation in all cases as soon as a positive diagnosis is made. Too many of them get well and stay well, to warrant it, and others can be made to wait, and have the operation done during an interval between the attacks, when the inflammatory symptoms have almost if not quite disappeared, the danger of sepsis has been passed, and the risk of death from an operation is almost practically nil.

When the attack is sudden and severe, the pain intense, pulse rapid, temperature high, respiration short and thoracic, abdomen hard and distended, face pinched and anxious—especially if the group of symptoms have been ushered in with a chill—the only hope for life is an operation, and the sooner the better. Such a case is called a fulminating one (it comes on like an explosion), and we are not warranted in waiting an hour to try medicinal remedies. In such cases if, along with other symptoms, there is shock, perforation will almost certainly be found, and the chances for life are very slight even with an early operation. Fortunately such cases are very uncommon, but it is just such cases that have made some good surgeons say, "Operate in all cases, and at once, when the diagnosis is made." It is these fulminating cases that have produced a panic among the lay people, and have struck terror among

many practitioners of medicine. I have seen during the past year but one case of perforating appendicitis; the man was moribund when I was called in, and no operation was attempted.

When the symptoms are presented more slowly and less severely, when the pain is not so great, abdomen flat, pulse, temperature and respiration nearly normal, little or no swelling or hardness in the right iliac region, then there is no such reason for haste. We can safely wait for some hours and watch the progress of the case, and this watch should be most carefully made. Of all the cardinal symptoms the temperature is the least reliable, and, in many cases, should be the least considered. The nausea and vomiting, and the effect of the disease on the sympathetic system, is often so profound as to keep the temperature down to almost normal. In two of my cases the temperature was 99°, and yet I found in each the appendix dead, and so rotten that it was difficult to handle it without tearing it; but it is important to remember that while the absence of high temperature is no indication that serious mischief is not going on, the presence of a high temperature, say 102°, shows that serious changes are probably taking place. The most important symptom to note is the pulse; it is what we used to call the "abdominal pulse," small, thready and frequent. As the case improves the pulse gets less frequent and less small, and *vice versa*, when the inflammation grows worse the pulse gets more frequent. In appendicitis a pulse of 120° is a sign of great danger. When the pain grows worse, the pulse faster, and possibly the temperature higher, and rigidity of muscles over the inflamed spot greater, the case is growing worse.

### III.—VALUE AND LIMITS OF SALINE PURGATION.

In an ordinary case, not a fulminating one, after a short time the pain abates, the fever lessens, the pulse gets slower, the abdomen less hard and tender, and all the urgent symptoms more or less subside—they do not disappear, but are less pronounced—and then there comes in a remedy which in my hands has been as certainly valuable for good as quinine in malaria or arsenic in neuralgia; that is, saline purgatives, given in frequent doses until the patient is freely and repeatedly purged. The copious and numerous watery operations "bleed" the bowel and peritoneum and lessen the congestion or inflammation. I have watched case after case during this period of lull in the symptoms, in grave doubt whether the exudate would be taken up and resolution of the inflammatory product occur, or whether it would continue on to suppuration or gangrene, or both, and have seen the former rapidly follow free saline purgation.

If the disease continues after the purging, the abdomen is left in a better condition for a future surgical operation. I am always glad, in any abdominal or pelvic surgery, to know that my patient has been well purged and that the bowels are empty. If, after free purging, the pain continues, the pulse is rapid, the belly tender, an operation should be done without further delay. Some surgeons are strongly opposed to the attempt to purge, and in some cases rightly so. In fulminating appendicitis, an attempt to purge would most likely fail and the purgative add

materially to the trouble; and to try to purge a case when pus or gangrene was present would be simply silly and mischievous; but to denounce saline purgation in every case is as wrong in principle and in fact as to demand operation in every case as soon as the diagnosis of the disease is made.

IV.—RELATIVE FREQUENCY OF THE DISEASE IN THE TWO SEXES.

From the reports of many surgeons we learn that appendicitis is much more common in males than in females; the proportion stated is one to four. This has not, however, been my experience. In the cases for the past year, which I present to-day, it will be seen that thirteen were females and thirteen were males, and this has been about the proportion of all my cases, amounting now to 155, the cases being nearly equally divided between the two sexes. At one time, say ten years ago, it was believed that the female was almost exempt from inflammation of the vermiform appendix. Lately, however, more and more cases have been seen in that sex. There is certainly no difference in the anatomy, physiology, or pathology of the organ in the two sexes to account for its greater frequency in the male; the additional little artery—sometimes, but not always, found in the female, and supposed to give better nutrition to the appendix in that sex—will scarcely explain the difference. By some it is ascribed to injury to the appendix by the psoas muscle in the male. Is the relation of this same muscle in the female so markedly different? I think not.

Frankly, I am at a loss to know how to explain my record. I know that I am no better, and, in many cases, not so good, a diagnostician as some other surgeons, and yet I cannot help sometimes thinking that the very aggressive gynecologists—and I beg to assure any of them present that I mean no offence—have taught us so much about ovaritis, salpingitis, tubal pregnancy, and so forth *ad infinitum*, that the hard-working, honest practitioner is led to believe that every unusual symptom of trouble about the pelvis must refer to some one or other of the female organs of generation, and I fear many a case of trouble about the cæcum and appendix has been treated for ovarian or tubular disease. Indeed, I confess to having made the mistake in more than one instance myself. In one of the cases in this report, in my ignorance, I treated the patient for some months for ovarian trouble, and when at last the symptoms were so pronounced that I could no longer mistake them and I operated, I found an adherent appendix filled with pus. I think it would be well, when called in to see an obscure case of pelvic trouble in the female, not to let the gynecologist make us believe that there is nothing else in a woman's pelvis but the uterus, tubes and ovaries. I recall a case, fifteen years ago, of a lady to whom I was called in consultation by Dr. Lewis Wheat, of my city. Two days before she had been delivered of a child and was supposed to be suffering from puerperal sepsis. She died, and, as the labor had been easy and natural, it was difficult to explain the result. Dr. Wheat made a post-mortem, and found that a large abscess of the appendix had burst during labor, and flooded the cavity of the abdomen with pus. Another patient, a lady, married, aged 33, had been in

bed for five months, suffering from frequent attacks of violent pain in the right iliac region, spreading over the whole of the abdomen. For these attacks she was given morphia by a physician then in attendance, but now dead. The attacks were so frequent and the morphia given so liberally that she became an opium *habitue*, and was miserable without the drug. She was naturally a weak, hysterical woman, and this state of mind and body, along with the opium, made it very difficult to get from her a true story of the case. I found that she was pregnant about four months (although she denied it most emphatically), and that her tubes and ovaries were free from disease. She was tender over the right iliac region, and I found there more muscular tension than upon the opposite side; there was no swelling. The point of tenderness was in the right flank on a line with the anterior superior spinous process, and not in the pelvis. An examination through the vagina of the contents of her pelvis gave her no pain. When the attacks were at their worst she had vomiting and tympanitis. When I opened the abdomen I found an inflamed and adherent appendix, with some exudate but no pus. She got well, gave up voluntarily the morphia before she left the hospital, and is now in the eighth month of pregnancy. This is the second time I have operated for appendicitis in pregnant women—the other case at the sixth month of pregnancy. Both cases recovered and neither miscarried. I do not think one should hesitate to operate during any period of pregnancy, or even during parturition, if the case required it.

### V.—DIFFERENTIAL DIAGNOSIS BETWEEN APPENDICITIS AND DISEASE OF THE TUBES AND OVARIES.

The diagnosis is not easy when inflammation of the right tube and ovary and of the appendix occur at the same time. We have in both rapid pulse, rise of temperature, pain, vomiting and tympanitis. There are, however, some points of difference that will often enable us to distinguish between the two diseases. Appendicitis begins more acutely. If it is a chronic case, there is a history of one or more former sharp and sudden attacks. Lesions of tubes and ovaries are of older date and have a history of menstrual disorder. The pain of appendicitis is acute, frequently violent, beginning over the solar plexus, radiating over the whole belly, and finally settling in the right iliac region. In adnexal disease the pain is dull and heavy, and never sharp and lancinating until the peritoneum is involved. The patient is more alarmed in appendicitis than in disease of the adnexa. The location of tenderness is different; in appendicitis it is on a level with the anterior superior spine; in adnexa trouble it is in the pelvis. In the latter, vaginal examination reveals the site of tenderness; in the former, you can touch and move the organs in the pelvis without producing pain. Vomiting is more common in appendicitis. Rigidity of the muscles of the abdominal wall over the right iliac region is almost always present in appendicitis, and generally absent in inflammation of the tubes and ovaries. Indeed, the muscular rigidity and location of the tenderness, or pain, will usually decide the diagnosis; but in case of doubt I would give chloroform, and by its aid the enlarged and tortuous appendix can be felt, probably fastened in its place by adhesions; or, by

a bimanual examination, we may discover disease of the adnexa. In cases of pus-tube on right side I believe the appendix, whether diseased or not, should be removed when the pus-tube is taken away.

VI.—TECHNIQUE OF OPERATION.

*In fulminating cases* the abdomen should be opened by a long incision, the gangrenous appendix ligated and cut off, and the belly washed out with gallons of sterilized water. Six or eight strips of iodoform gauze should be carried through the incision to different parts of the cavity. The wound should not be sutured, but every facility afforded for easy drainage. If such a case is not seen until the bowels are distended with gas, and the patient prostrated or collapsed, it is useless to operate. I have never seen a case of fulminating appendicitis without premonitory symptoms. A careful inquiry into the past history will always show former attacks which, possibly, however, at the time were not recognized.

*In cases where there is a deep-seated localized abscess* it should be rendered accessible by a free abdominal incision. The abscess should be carefully walled off from adjacent tissues by pieces of gauze and then opened. The pus should be sponged out and the appendix carefully searched for and removed. The abscess wall should be dissected out and the bowels examined to see that they are intact. It is impossible to treat such cases extra-peritoneally, and when you have exposed the cavity to the danger of infection there is no more excuse for doing incomplete work than in other forms of abdominal surgery.

*In cases where the abscess has approached the anterior abdominal wall and become adherent to the peritoneum* I simply open and drain it, and make no effort to extract the appendix if not loose, or to remove the wall. To endanger the infection of the general cavity by too prolonged an attempt to find the appendix is not, I believe, good surgery. The temptation is sometimes right great to persist in efforts to get it, as the patient and his friends feel a sense of disappointment when told that the appendix was not found. The disappointment is almost as great as they would have when cut for stone in the bladder and told that the stone could not be found. But no amount of anxiety on their part will justify the surgeon's running the risk of bursting through the wall and exposing the cavity to infection. If the wall is broken from any cause then, after sponging out all of the pus, I would remove it as you would do in case of pus-tubes.

*In cases of chronic or relapsing appendicitis* I do not advise an operation until the patient has had two attacks. Sometimes the inflammation which attends the first attack renders the patient free from a second attack because of some obliterating pathological change in the appendix. I make one exception to this rule—if, several weeks after the first attack, I find tenderness or induration, or both, over the region of the cæcum, I advise the patient to have the operation done at once. The operation should always be done between the attacks. In every case all adhesions should be freed, and any portion of the omentum in contact with the appendix which is suspected of being contaminated should be removed. (DR. HUNTER MCGUIRE, in *Southern Medical Record*).

## THE HEALTH OF OUR GIRLS.

Dr. Charlotte B. Brown, of San Francisco, in a recent paper on this subject, said: "The great number of invalids amongst women, and the multiplication of specialists in diseases of women, may call the attention of physicians to its cause, and their duty towards the prevention of this disease in the earlier stages. During the last two years the writer found that one-sixth of the new cases in her practice had been girls and single women under 32 years of age. One-fourth of this number were teachers, typewriters, telegraph operators and dressmakers, the rest mostly school girls under 19 years of age. The cases are similar in type and general history; tall and thin, or overgrown in flesh, but languid, easily tired, irritable, with backache, irregular menses, anemic and sallow, capricious appetites, dyspeptic, constipated. Examination of the cases shows, in general, a small uterus with endometritis, more or less profuse catarrh, frequently stricture of the internal os, and sometimes displacements. The need of local treatment in such cases is brief, but much time and thought should be expended to procure the proper adjustment of the whole machinery, and to prevent these girls from lapsing into special invalids for years. The author believed that the foundation for this ill-health was laid somewhere in the schools, for California, with its climate, was especially favorable to young people. An inspection of the ninth grade of the grammar schools of San Francisco, during the past three months, shows several hundred girls of the age of 15. Twelve to thirteen years of age is the usual time in California for the establishment of the menses. This age corresponds to the seventh grade of the schools, and teachers find that girls rarely ask to be excused on account of dysmenorrhea. In the ninth grade the attendance was over 90 per cent., showing that mothers do not regard it as necessary to keep their girls home during the period. Evidently, the cause of the girls' ill-health was to be sought elsewhere than in puberty. A list of questions was therefore prepared for the ninth grade of the grammar schools, and the first year of the high schools, and through the Board of Education of Oakland and San Francisco the following questions were submitted to the girls, it being understood that their replies were optional: 1. Do you eat breakfast? 2. What does your breakfast consist of, generally? 3. Do you have a warm lunch? 4. At what hour do you go to bed at night? 5. Do you often go to bed later? 6. What regular duties, if any, do you have at home, daily, in connection with housework, or anything else, and how much time do they take? These were answered by 287 girls in Oakland and 1,000 girls in San Francisco. In reply to the second question, 386, or more than 33 per cent., answered, "coffee and bread, or roll and hot cakes." Thirty said, "no breakfast," or "a glass of hot lemonade," or "coffee and cod-liver oil," or "hot gruel." The rest detailed the usual American breakfast. Four hundred and ninety-three, or nearly half the girls, eat lunch, and 10 p.m. was the average hour of retiring for 1,000 pupils, 206 retiring after that hour. Five hundred and nineteen girls, or about one-half, report some duties in housework, from fifteen minutes to three hours

daily. Three hundred and fifty-nine girls carry on special studies in music, French, etc. The author inquired whether it was surprising that a sensitive girl, after studying too late at night, eating a poor breakfast, a cold lunch, and having but a small amount of exercise, should begin to suffer with the symptoms already recounted? All the more will this state of things maintain if a girl goes once or twice to the theatre, or to a surprise party, and then tries to adjust lessons in study by taking time needed for exercise and meals. Two needs that occurred to the author in this connection were, first, the establishment in all towns and villages of outdoor gymnastic fields especially for women; second, a building near the large grammar and high schools for training in physical, manual and domestic science, as part of their regular school work. In conclusion, the author presented the following points for the consideration of physicians, and for general dissemination in the school boards, of which they are often members: 1. Rising early enough to fill one's lungs with pure air, after a suitable toilet, a cheerful, generous breakfast of material chosen on which to do four good hours' work before noon; that is, some home duty, a brisk walk to school, with three hours of study. 2. A warm lunch, even if but a cup of cocoa or hot milk, or lunch-basket meal. Conveniences for preparing such a dish should be provided in every school, office or factory where human beings eat the noon meal, unless a place near by offers such food for a few cents. In some cities this want is filled by the New England kitchen, which sends large receptacles of hot soup to the schools. The contents, too, of the lunch-basket are worthy of inspection. 3. The great need of exercise and, besides the morning duties, an hour at least, after school, should be given to out of-door sport. Errands, which were many times noted on my list of answers, are good; so is a bicycle ride, or outdoor gymnastics, or a good walk, which should be felt, not a duty, but a pleasure. 4. No study allowed after 9 p.m., and every girl of 15 years should be asleep at 9.30 p.m., later being permitted Friday or Saturday nights only; even then, not very often. 5. Urge upon parents that the social life of school girls should consist of afternoon entertainments, and almost never evening parties.

## INSTRUCTION IN THE ART OF PRESCRIBING.

The art of prescribing is one which bids fair to pass from us under the pressure of brilliant feats of operative surgery, and the startlingly new biology, serum and organo-therapy. What with studying the X-rays, experimenting with organic extracts, and carrying out micromorphologic observations, the medical student's time is so thoroughly occupied that something must be sacrificed, and judging from a recent article on prescribing in a prominent German medical journal, it would seem that in Germany, as well as in America, there is a marked tendency to neglect the important art of prescribing.

Professors Romberg and Schlegtendal have lately called attention to the neglect of this branch of instruction in medical courses in Germany, and in a recent contribution to the subject, Professor Binz (*Berlin Klin.*

*Woch*, 1897, 48) has recorded a large number of accidents which were due to errors in prescription writing.

Some of these errors, it is true, were not errors of ignorance, but originated in careless writing or faulty abbreviations or other details. Professor Binz holds that the remedy lies with the clinical professors, who should see to it that the clinical student writes out explicitly each prescription ordered without resort to memorandum books or other prompting. In other words, Professor Binz holds that in the clinic the conditions should approximate as closely as possible those which would exist in actual practice, in prescription writing as well as diagnosis.

In the United States as well as in Germany there is much neglect of this important branch of the physician's education. In order to effect a slight economy in the work of hospital apothecaries, it is almost a universal custom to have a series of stock prescriptions ready, which are ordered either by numbers or letters. It is true that the hospital formulary will tell the embryo practitioner what he is ordering when he writes for eight ounces of No. 15, and the students when ordering these prescriptions know in a general way what the constituents are, but such ordering does not give any practice in prescription writing, and moreover tends to establish a habit on the part of the young physician of depending upon routine treatment, a habit which is most prejudicial to his best and wisest development as a physician.

It is to be hoped that the attention being paid to this in Germany will find an echo in our American medical schools and the hospitals attached to them. If the hospital authorities feel that they cannot afford the time required for the apothecary to put up individual prescriptions we think an effort should be made to follow the plan which has obtained of late in Atlanta, where the dispensing department of the medical college hospital has been placed in charge of the college of pharmacy, and details from the senior class are furnished to do the dispensing under the supervision, of course, of the apothecary of the hospital, who is a college instructor.

By a slight effort the schools of medicine and pharmacy might co-operate in this way to their very great mutual advantage. The pharmacy students would be given opportunities for a wide range of experience in prescription work under competent supervision, and the medical students would be furnished the opportunity to learn by practice the routine which they will necessarily have to follow when once they have left the hospital service.—Editorial in *American Druggist*.

---

## ANTIPYRIN AND LACTATION.

After various researches made by M. G. Fieux, says a writer in the *Bulletin Médicale* of September 5, 1897, he reached the following conclusions:

1. Antipyrin certainly passes in a natural state into the milk.

2. Given in large doses, in two capsules each containing fifteen grains at intervals of two hours, it may be detected in the milk in from five to

eight hours after its ingestion, and from nineteen to twenty-three hours afterward it cannot be discovered, so elimination lasts eighteen hours at the maximum.

3. The antipyrin during this time passes into the milk only in an excessively weak proportion, very much less than fifty parts in a thousand; it is only in exceptional conditions—for instance, when sixty grains are administered in sixteen hours—that it perceptibly reaches this proportion.

4. It does not influence in any way the quality of the milk and, particularly, the lactose, the casein, or the fat.

5. It seems to have no action at all on the secretion, which always remains very abundant, provided the woman continues to nurse.

6. From the absence of general symptoms and from examinations of the weight, the infinitesimal quantity absorbed by the nursling does not seem to have any unfavorable action.—*New York Medical Journal*, Oct. 23, 1897.

## ON THE VALUE OF ARSENIC AND BELLADONNA IN THE TREATMENT OF CHOREA.

In a recent issue of the London *Lancet*, Overend concludes an article on this topic in the following summary:

1. Belladonna appears to be most beneficial in recent cases, and its influence is sometimes very marked in severe forms.

2. In obviously rheumatic cases arsenic in large doses may be given a trial or may be combined with belladonna from the first. Belladonna may act by diminishing the excitability of the nerve centres or by imparting an improved tone to their vascular supply.

3. In the wards of a hospital it is perfectly justifiable to give to a child as much as thirty minims or more of tincture of belladonna every four hours for ten days or even longer. Certain precautions are necessary. The patient should be kept in bed and the urine carefully measured. Small doses of potassium acetate may be added if it becomes much diminished or if the eyelids show any puffiness. In one child nocturnal incontinence occurred, and the dose was lessened. The occurrence of the papular erythema, which leaves raised circular lumps for a time, does not necessitate any diminution of the dose. Dryness of the throat and swelling of the parotids, should they occur, are merely temporary. The influence of the belladonna makes itself felt after about four days. Should no visible improvement occur before the tenth day, it would be useless to continue with it. But in eight severe cases treated belladonna was of benefit, and is certainly worthy of further trial. As soon as the movements become trivial or occur only during exertion, it is better to omit the belladonna, to commence massage of the affected muscles, and administer cod-liver oil and syrup of phosphate of iron or other tonics. The arsenic may be continued for a week or longer.

(Belladonna as an adjuvant is often valuable; but such heroic dosage from the start one would hesitate to adopt.—ED.)

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF
CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

## NOTES UPON THE EPILEPTIC AURA, WITH REPORT OF SOME RARE FORMS.

By L. PIERCE CLARK, M.D.,
First Assistant Physician at Craig Colony, Sonyea, N. Y.; Member of N. Y. Neurological Society, etc.

From time to time it seems desirable that we should formulate the latest advances of our knowledge about the various phenomena of disease; in no field does this seem more desirable than in our study of epilepsy. That which should attract our attention first in a clinical sense is the aura or warning. The aura of epilepsy is so elusive and indefinite that it must be approached with great care in order that we may obtain an accurate knowledge of its nature. Although such statements are old, they will bear repetition as often as we have occasion to study this fleeting stage of an epileptic fit. Unless one bears such a thought constantly in mind he is almost certain to make mistakes at every turn of his investigation. As the aura portrays the onset of the furious nervous storm which follows, it is absolutely essential that we should give it careful attention first, in order that we may form a complete concept of epilepsy.

At the very beginning of our study of the aura we meet with many difficulties. Obviously, epilepsy cannot be studied to advantage when much mental impairment has taken place, and, again, because the symptoms of the aura are almost entirely subjective, the patient's statements must be weighed carefully before being accepted as final. Before any neurological significance of his aura can be entertained repeated examinations are necessary, until it is found that the nucleus of the patient's statements agree in substance throughout.

At various times writers upon epilepsy have laid special stress upon the aura; some consider it a symptom pointing to a favorable or unfavorable prognosis, according to the kind and character of the aura; others have maintained that the aura indicates the seat of the earliest nervous discharge in the cortex, and the area in which the discharge ultimately is most complete. Still others have laid great stress upon it as indicative of the peripheral origin of the seizure which was referred to special motor and sensory functions; limited space forbids our considering each of these views in the light of recent investigation.

In considering cases in which the special sense auræ are present, we would naturally infer that olfactory and optic disturbances would be most frequent because of the direct connection that these special sense organs have with the brain proper. In a careful review of 241 cases of epilepsy which have been admitted to the Craig Colony, the special sense aura of sight was found most frequently, and but one case of the sense aura of olfaction was observed. Why the disturbed sense of olfaction is so rare in epilepsy when this sense has fully as direct a connection with the brain as has that of sight, is a matter for further study and investigation.

The sensation of great fear, as of impending death, which is not infrequently experienced by the epileptic in his sensory and psychic aura, probably is not so much dependent upon the attenuation or loss of consciousness as it is upon the disturbance of cardiac and respiratory rhythm. In two or three cases in which this aura was habitually present, the patient stated that the fluttering feeling in the cardiac region (palpitation) and the inability to breathe were recorded long before the conscious state had become materially impaired. One can easily understand that such important functions as that of respiration and propulsion of blood when interfered with would materially affect the whole sensory apparatus of the organism.

Again, the epileptic cry is frequently said to be due to an expulsion of the residual air of the lungs, caused by convulsive compression of the thoracic muscles diminishing the capacity of the thorax, but this cry is frequently prolonged, and consists of many inspiratory as well as expiratory acts, and is probably due in a great measure to the clonic spasm of these muscles. Again, it seems quite probable that some cortical disturbances in the speech area are also present, as the patient not infrequently articulates words as well as utters the prolonged cry.

A fact of great interest in studying the aura of epilepsy is that certain widely different areas of the brain may be simultaneously exploded or disturbed and give rise to auræ of different kinds which are associated at the same time with each other—the so-called mixed auræ.

If one accepts the ideas of liberal writers upon cerebral localization it is not so difficult to account for the origin of two apparently widely different areas of disturbance in sensory realms. We believe that almost all authors now maintain that sensory centres do not admit of so clear a definition as motor areas, but occasionally widely different sensory and motor phenomena are manifest in the same case; to form a satisfactory or adequate theory for such a case is very difficult. We must be content with conjecture until the true physiology of the cerebral cortex lights the way.

The great frequency of the epigastric aura finds a satisfactory explanation in the general statement of Mercier,[1] who localizes the peripheral sensory sensations in the epigastrium because he believes that in primordial life the stomach or epigastrium was the earliest and most important seat of pleasure and pain.

[1] Tuke's Dictionary of Psychological Medicine, Vol. I, pages 253 and 254, Chapter upon Consciousness.

Cases have frequently been reported in which the unstable, discharging centre of the epileptic's cortex has been completely exhausted by repeated explosions, each discharge being more severe and exhaustive than the other, but cases of epilepsy in which the motor aura acting as a seizure has completely taken the place of an attack, are very rare. A case which is at present under the writer's observation has shown this peculiar epileptic phenomenon. Commonly for several hours before an attack, and occasionally for an entire day, the patient has a convulsive movement of both arms, finally causing him to raise them to maintain his balance. This muscular movement occurs every few seconds during the progress of the aura without his once falling. Although the patient may do his work in the meantime, he is very irritable and rarely recognizes the fact that he is passing through an epileptic aura and may soon have a true convulsive seizure. He shows by his manner and speech that his state of consciousness is considerably disordered. Occasionally after a severe attack, these flurries following the regular convulsive storm continue for hours before he returns entirely to his normal inter-paroxysmal state. Quite frequently the patient passes the entire day in this peculiar state of consciousness attended by inco-ordinate muscular movements which are not ultimately followed by a general convulsive seizure. An additional interesting feature of this aura is that it occurs in an idiopathic epileptic and no trauma has ever been alleged. The etiology and pathology underlying such an aura are still unknown. This patient has been under the writer's observation daily and almost hourly for the past year. Such a case of epilepsy presents an unusually interesting opportunity to study the manner in which consciousness is attenuated and finally lost. Undoubtedly this man at times holds the entire mystery of the pathogeny of an epileptic fit—its motor and elusive sensory phenomena. How unfortunate that we are not to be able to see that mysterious mechanism! This patient is still intelligent, and seems remarkably devoid of the emotional characteristics which are frequently seen in cases clinically allied.

While present authorities hold that the aura represents the area of the brain which takes the initiative in the seizure, we must remember that this can be only the fulminate which starts the discharge, whereas some other area might begin the explosion if the seizure were but a little delayed. This one fact shows that the greatest study and endeavor should be directed toward ascertaining the exact cause of the great instability of the whole cerebral cortex.

The writer desires to embody in this article some uncommon forms of epileptic aura which, in the light of our present knowledge of the functions of the nervous system, seem like mere vagaries of the epileptic's disturbed mental state.

*Case 1.*—Phrase Recurrence.—Patient states that prior to her attacks she has a recurrence of phrasing, which differs from normal thought, as it is recurrent and grows more intense at each repetition. The phrase is "nicht wiedersehen." This aura has been present prior to most of her attacks for the past year. Occasionally the phrase changes to "auf dem reirdem." She states that there is no apparent connection

between the occurrence of these words and normal thought in everyday life, and that she does not know the meaning of these words. She has never had insistent ideas or word dominance of phrase rhythm. At no time have these recurrent phrases been present after the attack or in the interim. This is a rare psychical aura.

*Case 2.*—AURA LACHRYMALIS.—Patient states that about two hours before an attack he has a stupid and confused feeling and that about fifteen minutes before it occurs he feels very depressed and has an undefinable sense of fear. At times during the aura he weeps and cries loudly, while at other times he weeps quietly by himself. This peculiar aura makes its appearance prior to about one-half of his regular epileptic seizures and continues until the convulsion occurs, which usually begins with an opisthotonic contraction of the extensor muscles, lasting for twenty or thirty seconds.

*Case 3.*—PAIN IN HYPOCHONDRIUM.—Patient has a sense of pain in the left hypochondrium, which is located in the muscles of the side. This aura is present before about one-third of her attacks. Gowers states that this aura has never been observed.

*Cases 4 and 5.*—DREAMY STATE.—These patients experience a "dreamy state" about one-half hour before each attack. During this time they are stupid and incapable of performing simple acts. These auræ are present before all their attacks, but are never found in the interim, nor do they take the place of an attack. Depressed states of this character have often been commented upon by Hughlings-Jackson and Gowers, but always as a phenomenon which takes the place of a regular seizure, not as an aura.

*Case* 6.—MIGRAINE.—For ten or twelve hours before an attack patient is afflicted with migraine, which is localized over an area 2½ inches in diameter at the left temple. The pain is persistent and severe up to the time of the seizure. Occasionally this takes the place of a seizure and always disappears as soon as the seizure ceases. Occasionally this aura and the seizure may be aborted or prevented by proper treatment with salicylates. The association of migraine and epilepsy has long since been fully treated by various writers, but an attack of migraine acting as a distinct aura has been but rarely noted.

*Case 7.*—SPASM OF THE MASSETERS.—Patient has a clonic spasm of the masseters. The teeth chatter for an hour or two before the attack begins, loudly enough to be heard many feet away. Patient's teeth have been entirely destroyed by such forceful movements.

*Case 8.*—OLFACTION.—The aura is of the special sense and distinctly one of olfaction. An odor of "wood smoke" is noticeable before about one-third of his attacks. But one other case of a similar character has ever come to the writer's notice.

*Case 9.*—ANALGESIA OF TONGUE.—Patient states that for ten or twelve minutes before at attack begins there is entire loss of sensation in the anterior half of the tongue. It becomes numb and she is unable to speak because of the loss of control of the tongue. There is a carefully and accurately defined sensory and motor aura associated in the same case.

*Case 10.*—PAIN IN RIGHT THIGH.—Patient states that the aura con-

sists of a lancinating pain in the middle of the right thigh. It persists for fifteen or twenty minutes before the attack. Generally the attacks occur in series.

*Case 11.*—Peripheral Analgesia.—Patient says that the aura is very persistent and exists as a numb feeling over the entire periphery. It is sudden in its onset and gradually fades away, only to reappear every two or three minutes until the seizure occurs.

*Case 12.*—Chilly Feeling in Lumbar Region.—Patient has a "chilly feeling" in the lumbar region for hours before an attack. A sensory aura in this region is very rare.

Aura of Fear.—Three cases have an undefinable sensation of fear and a desire to escape from the room without actually making an effort to do so. This has also been commented upon by other writers as a petit mal attack, but in these cases it is a distinct aura and ceases as soon as the attack begins and is never present in the interim.

---

Spinal Deformity.—Wolff criticises severely Calot's method of forced reduction of angular deformity of the spine. It is questionable whether the deformity is actually reduced or whether the wedge-shaped excision of the projecting vertebræ only makes the reduction apparent. Sufficient time has not elapsed to determine the permanency of the cure. There is no doubt that these forcible measures predispose to abscess-formation, general miliary tuberculosis, injury to the internal organs, spinal cord, etc.; and already 12 fatal cases have been reported, in which the method was directly responsible for the result. In addition to this mortality, a number of serious accidents have followed, and in many cases the attempt at reduction was unsuccessful. That Calot is himself losing faith in his own method is shown by the tone of his most recent writings, in which he advises the employment of less force, and the discontinuance of the resection. Wolff objects to the method on the ground, first, that reduction cannot be accomplished with the extreme gentleness ("*douceur extrême*)" that is prescribed; secondly, that the accessory treatment—the narcosis, the enormous immobilizing dressing, and the dorsal decubitus necessary for so many months—is not only ill-advised, but also unnecessary for the accomplishment of the final result.—*Philadelphia Med. Journal.*

---

Hæmorrhage in Hæmophilia.—Bienwald employed a very original method in the case of a child aged two years, the subject of hæmophilia. Having failed to arrest the hæmorrhage from a small wound on the face by the application of perchloride of iron, he obtained some blood by aspiration from a healthy subject and deposited it on the wound. In a few minutes it coagulated, and the hæmorrhage at once ceased. His explanation is that it supplies the ferment necessary for thrombosis in the small vessels. Whether this is correct or not is impossible to say in the absence of definite knowledge of the pathology of hæmophilia. As affording his explanation some support we may mention the success obtained by Doctor Wright in his experiments with a solution of fibrin ferment and chloride of calcium as a styptic.—*The Lancet* (London).

# NOSE AND THROAT.

IN CHARGE OF
J. MURRAY McFARLANE, M.D.,
Laryngologist to St. Michael's Hospital. 32 Carlton Street.
D. J. GIBB WISHART, B.A., M.D.C.M., L.R.C.P.L.
Professor of Laryngology, etc., Ontario Medical College for Women; Lecturer in Laryngology and Rhinology, Trinity Medical College; Rhinologist and Laryngologist Hospital for Sick Children, St. Michael's Hospital, and the Girl's Home; Toronto General Hospital. 47 Grosvenor Street.

## REPORT OF A CASE OF ACUTE PURULENT OTITIS MEDIA, COMPLICATED BY RETROPHARYNGEAL ABSCESS.

BY FRANK L. STILLMAN, M.D., COLUMBUS, OHIO.

This case is thought worthy of report on account of the rather unique series of complications, the happy subsidence of ominous symptoms, the perfect recovery, and because detailed histories of cases of acute purulent otitis media with this complication are rather uncommon in medical literature.

The subject of the sketch is an attorney, aged about forty, and unmarried. He is of a nervous, sanguine temperament, and never suffered from much illness. For some years he has had a moderate amount of chronic otitis media (catarrhal) which was aggravated, if not induced, by a deviated nasal sæptum. In February, 1896, he fell through an opening in a stable loft, and was unconscious from the resulting concussion for several hours.

The evening before his first visit he was assisting in the work of initiating candidates into a quasi-secret club. After spending the evening in this convivial manner he came home on his bicycle about twelve, midnight. The air was damp, a cold wind was blowing, and when he reached his apartments he felt thoroughly chilled. At 1 a.m. he began to have pain in the left ear, which was severe enough to keep him awake the balance of the night. Upon inspection the next morning (which was April 18, 1896), the left membrana tympani was found highly hyperæmic and bulged, and he complained of a deep pain in the ear. Paracentesis of left membrana tympani in posterior inferior quadrant under antiseptic precautions. There was an escape of considerable serum. This gave him marked relief from pain. He was instructed to remain indoors and use Leiter's cold coil. During the next two or three days the history was that of an ordinary acute purulent otitis media. About the third day the serous discharge was assuming a purulent character. The temperature varied from 99.4° to 101.8°, and pulse about 70. On the third day the ear was cleansed with a warm solution of bicarbonate of sodium, listerine and water. The ear was syringed with this solution every few hours, and then a light coating of boric acid was insufflated, and a strip of iodoform gauze placed lightly in the meatus.

I will state here that the nose and rhinopharynx were kept sprayed out with an antiseptic spray throughout his illness.

On the 24th the temperature was normal, the discharge was diminishing, and outside of some restlessness he was feeling first-rate.

On the 27th he attended to business part of the day, but felt exhausted afterwards. Used gentle politzerization at this consultation and also the usual local treatment.

May 1st.—Had rather a bad night from a dull pain in the ear.

7th.—It is noticed that discharge from ear is gradually increasing in amount, so that he finds it necessary to dress the ear and change the gauze about every three hours. After syringing the ear, a few drops of a five-per-cent. solution of nitrate of silver were dropped in the external meatus and retained a short time. The ear was then gently mopped out.

11th.—Discharge is freer. An attempt is inaugurated to carry out an entirely dry plan of treatment.

13th.—Been in room all day, suffering from hemicrania in left side of head. Has a feeling of malaise. Ear foul. Temperature 100.3°. Cleansed and purified ear thoroughly with hydrogen dioxide, 1 to 5. Politzerization and syringing with warm water. Instructions were given to have this done (with exception of politzerization) by the nurse sufficiently often to keep the external meatus clean.

Hemicrania continued for two or three days in this manner. There were absolutely no symptoms, such as tenderness, redness, or swelling back of the ear, to indicate any mastoid involvement.

Feeling that there might be some retention of pus from insufficient drainage, a free cut was made in the membrana tympani in its posterior half, from a point back of the long process of the incus to the lower periphery. Patient had an attack of dizziness after the operation, which, however, was only momentary. Politzerization was gently used to force the pus from the middle ear into the external canal. The pain in the head seemed temporarily benefited, but the next day it was as severe as ever, the preceding night having been quite a restless and sleepless one. Upon a friend's (?) advice he dropped some spirits of camphor in the ear. This, of course, caused pain and aggravation of the symptoms. The writer, upon being summoned to his rooms, found him suffering from hemicrania, the pain of which seemed to focus at left side of the vertex and radiate toward the left temple. The left ear seemed a little more prominent than the right. The patient found it difficult to rotate his head, locating the stiffness in the back of the neck. The cerebral symptoms were sufficiently alarming to cause me to seek the counsel of a general surgeon, and Dr. Charles Hamilton was asked to visit him, and during much of the further progress of the case saw the patient often. In addition to trional, which the patient had taken occasionally for restlessness at night, codeine was prescribed, a quarter of a grain every hour, for the relief of the pain at the vertex. A hot bag was tried for relief of pain instead of cold, but was discontinued after a few hours, and the use of cold resumed. Has no fever.

On May 23rd it was noticed that the pulse was below fifty beats a minute, at times going down as low as forty. There appeared to be a

periodicity about the exacerbations of pain in the head, and quinine was prescribed, two grains every two hours.

24th, 11 a.m.—Pulse 46. Last night took one dose of codeine and two ten-grain trional powders. Mind seems a little sluggish this morning; is somewhat drowsy and quite weak; not much pain. At 4 p.m. took a little wine, and at 6 p.m. seems brighter.

25th, 10 a.m.—Pulse 46. Feels weak, and mind a little dull. Wine, half an ounce every three hours. Local and general treatment the same. Last night took one dose of codeine and two of trional. Discharge rather abundant.

The symptoms seeming rather grave, and fearing the formation of cerebral abscess, Dr. Kinsman was asked in consultation. The doctor, after a careful investigation of the history and the patient's present condition, thought there was no cerebral abscess, but the symptoms could, perhaps, be accounted for by a localized meningitis. Administered calomel and podophyllin, one dose.

26th, 9 a.m.—Pulse 58. Vomited once after taking a dose of quinine before breakfast. Flow from external meatus rather profuse. At 5.30 p.m. notice that ear shows evidence of increase of inflammation. Covering of bony canal swollen, and membrana tympani is deep red and thickened. Says opening of jaw causes a feeling of pressure in ear. Discontinued quinine.

Thinking that his environment might be adding to his restlessness and discomfort, it was decided to remove him to a hospital, and this was done at once.

June 1st—Pulse 70. Temperature normal. A tonic preparation of iron and the liberal use of eggnog were prescribed. Local treatment continued as before. Some increase of swelling of neck in front of sterno-mastoid and at angle of jaw.

2nd Temperature 99° at 9 a.m. For about a week has complained of his throat being somewhat painful, especially during deglutition. There was a little swelling in the left side of the soft palate, but it was difficult to determine whether this or his swollen neck was producing the discomfort. This morning, however, attention was more especially directed to the throat, and it was seen that the left side of the palate was assuming a more brawny appearance. The redness and swelling were more marked at the junction of the faucial pillars. Temperature that evening was 101°.

3rd.—Left side of throat was more swollen. Lanced it in three places—at upper portion of tonsil, in the anterior pillar, and in palate a little above junction of pillars—but no pus was found.

Directions were given for use of hot bag on neck. At this time the rhinoscopic mirror demonstrated the fact that there was some swelling in the rhinopharynx as well. This was not marked, but seemed to be below the opening of the Eustachian tube, and above and back of the posterior pillar.

5th.—As the opening in the membrana tympani was growing smaller, was again freely incised.

6th.—Pulse 70, of good quality. Is taking about eight glasses of milk daily. Eyes are brighter and complexion is better.

7th.—Took a drive this afternoon.

8th.—There seems to be a little increase of swelling in front of the tragus. Temperature, 99.7°; pulse 72. Was restless and sleepless last night. Discharge from ear about the same. Dr. C. F. Clark saw the patient in consultation. During his visit the usual treatment was gone through with. The Politzer air bag was used to demonstrate the patency of the Eustachian tube and the opening in the drum membrane. The escaping air brought with it a gush of pus from the external meatus—probably a drachm in amount. The patient looked up in a startled manner and said it felt as if something broke in his head. The pus was thinner and lighter in color than usual. The pressure of the air had caused the liberation of some pent-up pus, but the exact location of the barrier to its free exit, until then existing, could only be surmised; nevertheless, the direct communication between the swelling in the throat and the ear could readily be demonstrated, for when a finger was placed in the rhinopharynx and pressure made on the left lateral wall, pus immediately exuded from the ear.

10th.—An attempt was made to evacuate the retropharyngeal abscess with an aspirating needle. It was run through the soft palate into the pharynx in two places. At that time pus was not encountered, but the next morning the up-tip of an atomizer was forcibly pressed into the lateral wall of the rhinopharynx, the wall of the abscess was ruptured and a profuse flow of pus took place.

12th.—Could get no pus from throat by pressure. Discharge from ear has much decreased in amount.

16th.—Left tonsil is enlarging. The neck in region of angle of jaw is still swollen.

17th.—Temperature this evening 100°. Left tonsil is considerably enlarged and is softening. Steam inhalations were ordered.

18th.—Abscess in tonsil opened spontaneously. The opening was at the upper portion of the gland. A probe could be passed two centimetres in a downward direction. Using a Eustachian catheter as a guide, the internal wall of the abscess cavity was freely laid open with a bistoury. After this the patient improved quite rapidly and soon left the hospital.

30th.—A hard swelling remains in neck at angle of jaw. It began to soften about the 4th or 5th of July and a poultice was ordered. By the 10th fluctuation could be felt, and on the 13th it was opened and gave exit to a couple of ounces of pus. After that the progress toward recovery was quite rapid.

The last time he was examined by the writer was on August 28th, upon the patient's return from a month's outing. There was no aural discharge and the drum membrane had healed perfectly.

In taking a retrospect of this case several queries naturally arise in one's mind. 1. Is it not probable that the ominous symptoms which were referred to the brain were caused by the formation or retention of pus between the middle ear and pharynx? 2. By what route did the pus gain access to the rhinopharynx? In the writer's opinion the route was probably along the sheath of the tensor tympani muscle.—*N. Y. Med. Journal.*

## ANGINA PECTORIS FOLLOWING INFLAMMATION OF THE TONSILS.

Zilgien (*Revue médicale de l'Est*, October 15th, 1897; *Deutsche Medizinal-Zeitung*, March 17th, 1898) records four cases of angina pectoris of several weeks' duration following febrile inflammation of the tonsils. He thinks the trouble was a neuralgia of the cardiac plexus occasioned by toxic materials formed in the tonsils.

---

## GENERAL AND LOCAL ANÆSTHESIA IN LARYNGOLOGY AND RHINOLOGY.

General anæsthesia in intranasal operations, says Dr. Joseph S. Gibb, of Philadelphia (*Journal of the American Medical Association*, March 5th, 1898), is but a sorry substitute for local anæsthesia, and should be employed only when the necessities of the case urgently demand it.

We are obliged, at times, he says, to meet the wishes and desires of patients, some of whom prefer general anæsthesia because the operation can be done without their consciousness. At the same time it seems to him folly to undertake such operations merely to please the patient unless we are reasonably sure we understand beforehand every necessity of the case.

The larger number of intranasal operations being best undertaken under local anæsthesia, we must decide which of the few local anæsthetics will serve our purposes best, and the manner of its use.

Cocaine has held undisputed sway as a local anæsthetic for about fifteen years and, in the main, leaves little to be desired. Those who have used it freely, however, have now and then observed effects which have given rise to anxiety, and a few fatal cases have been reported from its use.

It has always been a matter of doubt to him in these cases of cocaine poisoning as to the part played by the shock of the operation. A nervous woman, he says, cuts her finger and faints at the sight of blood; this same woman should certainly be expected to faint during an operation on her sæptum. He believes that some of the cases which have been regarded as cocaine poisoning are of this nature. A very few can not be explained in this manner and we are forced to admit that in some subjects an idiosyncrasy exists to the drug.

More recently, eucaine has been extolled as the equal of cocaine in anæsthetic power, and, it is asserted, possesses no such tendency as the latter drug to produce intoxication.

Our experience with this new anæsthetic is necessarily too limited to assert positively as to the latter statement. There is no doubt in the writer's mind as to the validity of the former.

In an article published in the *Philadelphia Polyclinic* for January, 23rd, 1897, the author gave an experience of six months' use of this drug in the clinics of the Episcopal and Polyclinic Hospitals. It was found to have equal anæsthetic power with cocaine, as to both intensity and duration of anæsthesia in the larger number of cases.

Its power to reduce engorged turbinates was also equal to that of cocaine. In the pharynx, while it possesses equal anæsthetic power to that of cocaine, it does not produce those unpleasant suffocative, choking sensations which the latter drug at times induces. It is, therefore, much pleasanter in its effects in this locality. In no case were any symptoms approaching intoxication observed,

These results have been confirmed by a riper experience. Eucaine is now used at the author's clinics in all operations in the nares, nasopharynx, and pharynx, except in those few instances in which cocaine seems to have a better effect.

Its use in the larynx has been abandonded because cocaine has equal anæsthetic power and slightly less irritating and hence less apt to produce annoying and troublesome spasms.

The pleasantest manner of obtaining anæsthesia in the nasal chambers, says the author, is as follows: First spray both chambers with a two per cent. solution of whichever anæsthetic is chosen, to obtain tolerance for the harsher methods to follow. After waiting for a minute, saturate a small pledget of cotton with a four to ten per cent solution of the drug and allow it to lie at the site of operation for from five to eight minutes.

Nearly all the operations the laryngologist is called upon to perform in the pharynx can be accomplished under local anæsthesia. Eucaine is to be recommended in this locality. It causes less discomfort to the patient and it is also probably less likely to give rise to unpleasant general symptoms.

---

*Hamamelis in Renal Hœmorrhage.*—My father, an old man of sixty-three, was affected by these renal hæmorrhages, caused by calculi, and they had continued for ten weeks. In vain he had been treated most assiduously by three physicians; the bleeding could not be stilled, and in consequence he had become very weak. Taking a teaspoonful of extract of hamamelis five times a day checked the hæmorrhages, and besides this wonderful effect was *permanent*. Since two months he has completely recovered, and his urine is free from blood or albumen.—PAUL REICHERT.

---

Every medical man should be a member of a medical society. He will never know how great a man he is till some one praises him in a discussion, nor how small a man till some pompous fellow-member takes him to task; but all these frictions serve but to round and smooth a busy life, and no one can do without it who desires to be a physician in the highest acceptancy, and not a man who doctors.—*Atlantic Medical Weekly.*

---

*Acute Coryza.*—

℞ Menthol, 30 grains.
Chloroform, 5 drachms.

Inhale four or five drops, rubbed on to palms of hands, several times a day.

—*Therapeutische Monatschefte.*

# PAEDIATRICS.

IN CHARGE OF

ALLEN M. BAINES, M.D., C.M.

Physician, Victoria Hospital for Sick Children; Physician, Out-door Department Toronto General Hospital. 194 Simcoe Street, and

J. T. FOTHERINGHAM, B.A., M.B., M.D., C.M.,

Physician, St. Michael's Hospital; Physician, Outdoor Department Toronto General Hospital; Physician, Hospital for Sick Children. 39 Carlton Street.

## PARTIAL SYNOPSIS OF PAPER BY DR. W. F. BOGGESS, LOUISVILLE, KY.

EXAMINATIONS.—The difficulties of examination are often exaggerated. All necessary information as to beginning of the trouble, when and how taken, may be elicited from the mother by careful questions. Mothers, owing to their love and solicitude, are good observers, the doctor supplying all necessary gaps. The doctor should ingratiate himself with the child and gain its confidence.

1. Do not be abrupt or in a hurry; notice a child casually at first, then strip it and inspect every part. The tint of the face, the color of the lips, the general physiognomy, all help you to properly locate the disease. Blueness of the upper lip in early life is a common sign of labored digestion. Years ago it was pointed out that certain lines or furrows in the face of an ailing child, by their position, indicated the seat of the derangement.

(a) Oculo-zygomatic line denotes diseases of the brain and nerves.

(b) Nasal denotes abdominal mischief, gastro-intestinal trouble.

(c) Labial shows diseases of lung and air-passages.

2. Shape of head and limbs, attitude, cry, absence of tears, condition of fontanelle, etc.

3. Pulse, respiration and temperature.

4. Dietary habits.

5. Carefully inspect the ejecta from stomach or bowels.

6. Genital organs.

7. Rectum, etc.

TREATMENT.—1. Administration of physic is of less importance than dietetic regulations.

2. Occupy large and well-ventilated room.

3. All noise and bustle to be prohibited.

4. Should be fed through nasal tube or per rectum when necessary.

5. To reduce temperature.

(a) Tepid sponge bath.

(b) Warm bath, 80° to 85°, in convulsions and great irritability of the nervous system and in Bright's disease, remain ten to twenty minutes.

(c) Hot bath, 95° to 100° in great prostration, cholera infantum, urgent vomiting, remain four to five minutes; a little mustard may be added.

(d) Cold douche followed by vigorous shampooing in weakness, atony, scrofulous cachexia, etc.

6. Stimulants take a high place among internal medications.

7. Tonics, quinine, iron, mineral and vegetable bitters, cod-liver oil, etc.

8. Opium should be given cautiously.

9. Belladonna can be given in large doses. Children one year of age can take one to twenty drops.

10. Quinine, digitalis and lobelia are well borne.

11. Alkalies form a valuable class of remedies, also astringents.

12. Purgatives may be given, but do not overpurge.—*Pædiatrics.*

---

The Pulse in Diphtheria.—This has recently been made the subject of special study by Dr Henry Dwight Chapin, of New York. The cases were observed in the Willard Parker Hospital. He said that he had not infrequently noted a marked slowing of the pulse in grave septic cases, and that this might occur either before or after a rapid action of the heart. When the reduction in pulse-rate is extreme, death invariably occurs. Thus, in one case, the pulse dropped on the fourth day from 128 to 66 without much impairment of its strength. On the following day, however, the pulse became feeble, and 120 to 138 per minute; then stupor and vomiting supervened, and death occurred three days later. In another case, that of a boy of 5 years, the pulse was rapid for a few days, and then suddenly dropped to 28. At this time the sounds of the heart were fairly distinct. In spite of free stimulation, the child died in two days. It should be noted that a slow pulse without other symptoms is not necessarily a fatal indication. If, along with a rapid and feeble pulse, there is vomiting, it is of exceedingly grave significance, for the vomiting is as uncontrollable as the tendency to heart-failure.

Dr. A. Jacobi gave it as his opinion that the slow pulse, like the rapid pulse, is an indication of cardiac incompetency, and that the *timely* use of stimulants would, in many instances, avert the approaching heart-failure. Dr. J. E. Winters, on the other hand, believed that the profession was absolutely ignorant regarding the true nature of cardiac failure, as observed in diphtheria, and that as little could be done in the way of preventing it as in treating it when actually present. He said that the very slow pulse, all authorities agreed, was of very rare occurrence, and he had not personally observed it until the antitoxin-treatment came into vogue. As he had observed this slowing of the pulse in a number of cases that had received large doses of antitoxin, he was inclined to believe that there was some connection between the two. For example, in the case referred to by Dr. Chapin, in which the pulse dropped to 28, 6,000 units of antitoxin had been given. Dr. H. W. Berg opposed this contention, claiming that he had noted this peculiar slowing of the pulse in diphtheria many years before the introduction of the antitoxin-treatment, and that he had noted it very infrequently during the time that these large doses of antitoxin were being administered.—*Phil. Med. Journal.*

---

The Treatment of Prolapse of the Anus in Children.—F. Schmey (*Centralbl. f. Kinderheilk., 1897, ii, 41*) says that prolapse of the anus in

childhood is quite a severe and dangerous affection, for the reason that large hemorrhages frequently occur from the prolapsed mucous membrane, which is usually in a condition of venous stasis. This tends to debilitate the child.

In one of Schmey's cases the rectum prolapsed not only during each stool, but even when the child urinated, and latterly seemingly without any cause whatever. In addition there was much bleeding of the prolapsed mucous membrane, visibly reducing the patient's strength. Prolapse of the rectum is usually found in quite young, badly-nourished children. The author claims to have found marked symptoms of rachitis in all children treated by him for prolapse of the anus, and has directed his treatment accordingly. Up to the present time the usual treatment consisted in surgical measures, in the application of a bandage, the excision of spindle-shaped strips of the folds of skin which converge in radiating lines to the anal orifice, or a cauterization of the skin surrounding the anus with the hot iron. Others advocated the subcutaneous injections of strychnine in the neighborhood of the anus, chemical cauterization or the ligature, and excision with narrowing of the anus. The greater number of these measures are not safe; for example, numerous cases of death, due to pyemia, have occurred following cauterization of prolapse of the rectum.

Relying on the observation that all children with prolapse of the anus presented distinct signs of rachitis, Schmey put them on anti-rachitic treatment, and in this way claimed to have attained exceptionally brilliant results.

His formula is the usual one for the exhibition of phosphorus:

℞ Phosphori, 0.01
Ol. jecoris aselli, 100.0
Ft Sol.—Sig. One to three coffee-spoonfuls daily.

Generally the prolapse was perfectly cured after the use of one bottle of this medicine, and did not appear again. He offers the following resume: Prolapse of the anus in children, according to my observations, is a symptom and a sequel of rachitis, and its cure is easily and permanently accomplished by the administration of oil of phosphorus.

[This statement certainly does not apply in this country. Rickets and *prolapsus ani* are not commonly seen together here, and the latter condition here cannot be always cured by phosphorus internally.—J. T. F.]

---

PARALYSIS FOLLOWING MUMPS.—Revillod observed the appearance of paralysis in a boy seven years of age, after an attack of mumps, in which he could exclude infantile and post-diphtheritic paralysis. The paralysis attacked at first both lower, then upper extremities, and later involved the left facial area, the muscles of deglutition, the lingual and respiratory muscles. The sphincters and sensation remained normal. A perfect recovery took place in six weeks under proper therapeutic measures.—*Rev. méd. de la Suisse Rom.*

[A nice illustration of what we have learned in aetiology from bacteriology, that the toxin of any specific disease may produce peripheral neuritis, some like diphtheria frequently, others, as here, rarely.—J.T.F.]

SCHLEICH'S INFILTRATION ANESTHESIA.—(*Weak solution for use in children.*)

℞ Cocain hydrochlor..... 0.01
Morph. hydrochlor..... 0.005
Aquæ destill.....100.0
Sodii chlor..... 0.2

M. Ft. Sol.—*Pædiatrics.*

---

SYPHILITIC IMPETIGO.—

Hydrarg. oxid. rubr.,
Zinci oxid.....āā 1.5
Resorcin..... 0.6
Vaselin..... 30.0

M. Ft. ungt. Sig.—For external use.—*Phillips.*

---

SIGNIFICANCE OF THE FONTANELLE.—Involution of the fontanelle occurs normally from the fifteenth to the eighteenth month. From birth to the ninth month the fontanelle decreases gradually in area, and from this time till complete closure the decrease is more rapid. Retardation of normal involution indicates rachitis or hydrocephalus.

The fontanelle presents pulsatory and respiratory phenomena. The pulsation increases if the tension is slightly increased; diminishes or is lost if the tension be greatly increased.

A murmur over the fontanelle occurs in a certain number of children, most commonly in those who are anæmic or rachitic. It is not pathognomonic.

A slightly prominent and pulsating fontanelle indicates a cerebral hyperæmia, such as occurs in fevers.

A protuberant and tense fontanelle indicates an exudation or inflammation in the cranial cavity.

Retracted fontanelle indicates a condition of collapse, brought about by acute intestinal disease with profuse watery discharges, infantile atrophy from any cause, hæmorrhage, effects of prolonged acute infectious disease, or marantic sinus thrombosis.

In acute infectious diseases with meningeal symptoms, examination of the fontanelle shows no protuberance or tension, whereas in true meningitis these conditions are marked.

In the so-called hydrocephaloid, a terminal condition of cholera infantum marked by the occurrence of striking meningeal symptoms, the fontanelle is retracted.—AIT, in *Medicine.*

---

NIGHT TERRORS.—Braun, after critically discussing the existing theories on *favor nocturnus* in children, declares it to be a disease by itself, which is closely allied to the conception of neurasthenia, *i.e.*, "an irritable weakness." Following this, a description of the characteristics of the attack and their demonstration is given. The sudden jumping up of the infant out of its sleep—symptomatic, especially in colic—has no relation to night terrors. The etiology, as well as the treatment, is that of neurasthenia, and the latter should be pointed in the direction of nutrition and education.—*Der Kinderarzt—Pediatrics, September, 1897.*

# MEDICAL SOCIETY REPORTS.

## TORONTO CLINICAL SOCIETY.

Meeting was held on April 13th.

Dr. Albert A. Macdonald, President of the Society, was the chairman.

The minutes of the March meeting were read and adopted.

The following Fellows were present:—Dr. Nichol, of Baden; George Eliot, William Thistle, William Aikins, Chas. Trow, Graham Chambers, Eliot Brown, Geoffrey Boyd, Herbert Hamilton, Frederick Fenton, William Oldright, J. Algernon Temple, Herbert Bruce, William Pepler, F. LeM. Grasett, Albert A. Macdonald, George Bingham.

Dr. Bruce read a paper on The Surgical Treatment of Osseous Ankylosis of the Temporo-Maxillary Articulation.

Four years ago the patient fell downstairs, striking her chin forcibly on the lower step. Dr. Stevenson, who saw her immediately afterward, says there was no dislocation of the jaw, but that the alveolar process of the upper and the lower jaws in part were broken, causing part of the teeth of both jaws to be loosened. Some of the teeth penetrated the lower lip, the scars of which remain. She could remove the jaw freely after the injury, and continued to do so for about a year. Then movement gradually diminished until, one and a half years after the injury, the jaw became fixed. Then a wedge-shaped screw gag was used on eight or nine occasions, under chloroform. This was followed by temporary movement. Soon, however, all movement was lost and the jaw became absolutely fixed. On examination, August 9th, 1897, the jaw was quite fixed, neither lateral nor up and down movements being possible, and was said to have been in this condition for two and a half years. The jaw was displaced laterally to the right side about $\frac{1}{16}$ of an inch, indicated by noting the relation of the middle line of the two jaws, as shown by the incisor teeth. From this I concluded that the disease involved the right joint, and advised excision of the condyle. On Sept. 9th the transverse incision was made $\frac{3}{4}$ of an inch long $\frac{1}{4}$ of an inch below the zygoma, beginning just in front of the bar. The parotid fascia was divided along the zygoma. The parotid gland displaced downwards, the other joint exposed, the neck of the condyle was chiselled through and an attempt made to separate the jaws. This was found impossible. The coronoid process seemed to be held firmly to the skull. As the patient was taking the chloroform badly, it was thought wise to postpone division of the coronoid until a future time. Subsequent to this operation there was slight paresis of the orbicularis palpebrarum. Nov. 12th the jaws could be separated to a slight extent, probably $\frac{1}{16}$ of an inch. Nov. 13th an incision was made through the cicatrix of the former wound and extended forward about $\frac{1}{8}$ of an inch. The neck of the condyle was exposed and a copper spatula placed beneath it, to protect the internal maxillary artery. Entered the saw in the groove made at the first operation and went through the periosteum on the external surface, which had

not been completely divided. Now it was found impossible to open the jaw, so the saw-cut was extended partly through the base of the coronoid process, and division completed by means of the chisel. The jaws could not be separated until the chisel broke completely through the coronoid process; then the jaw was easily opened to the extent of an inch. The temporal muscle was parted from the coronoid process, and the later removed with a small section of the ascending ramus. Then the condyle was chiselled from the glenoid cavity, to which it was united by bone. The ascending ramus was trimmed with bone forceps. Then the index finger could be placed between the ascending ramus and the skull. On account of some oozing from the divided bones, the cavity was packed with iodoform gauze. The wound was closed with horse-hair, except at the posterior part, where the gauze was brought out. Gauze was removed the next day and wound healed by first intention. There was considerable swelling of the cheek for some weeks, which seemed to be due to obstruction of Stenson's duct. There was also some paresis of the orbicularis palpebrarum, but this has now entirely disappeared. The teeth can now be separated in front to the extent of $\frac{3}{8}$ of an inch. I think the inability to open the mouth wider is due to shortening of the masseter and temporal muscles of the other side, for the jaws can be separated an inch under chloroform. The patient is able to eat meat and other solids, and seems to masticate well. The operation was in the main after that of Bottini, done originally in 1872. This is, I think, the best operation for those cases of bony ankylosis of the temporo-maxillary joint without involvement of the soft parts. When the jaws are fixed by cicatricial contraction in the soft parts, due to noma, lupoid ulceration or burn, the section of bone must be in front of the cicatrix, and for these cases Esmarch's operation, that is, the removal of a wedge near the body of the jaw, should be done.

It is not always easy to discover which side ankylosis exists. The history may help, then the jaw should be examined, and there may be lateral displacement, as there was in this case, due to loss of cartilage. In the process which destroys the jaw, Cabot mentions another method of determining this: If the fingers are pressed in on the teeth on each side and at the same time the patient makes vigorous attempts at mastication, a spring of the bone on the free side will be noticed in quite distinct contrast to the fixity on the ankylosed side. In looking over the literature of the subject, 67 operations in cases of bony ankylosis of the temporo-maxillary articulation have been reported. Of these 47 were cured by Bottini's method, and this would seem to indicate that surgical opinion favored the operation being done close to the zygoma.

Dr. Bruce then presented the patient for examination.

Dr. Grasett said this was the first case of the sort he had ever seen. He thought the result was very satisfactory.

Dr. Peters said that he had seen the case at both operations, at which time there was very little movement. His recollection was that the coronoid was not ankylosed by bone to the skull. The first week after the second operation the patient would voluntarily open the mouth so that there was a distance of an inch between the jaws. Probably a larger por-

tion of the bone might have been removed, but if a great deal more had been removed, the chin would have been drawn too much to the one side of the mid-line of the face. Rather than to have this he thought it preferable to sacrifice one-quarter of an inch in the distance the jaws could be separated. He considered the result a very good one.

Dr. William Oldright drew attention to the comparative smallness of the teeth in the lower jaw. He had seen one case similar to the one presented, in which an attempt was made at breaking down the ankylosis by means of gags.

Dr. Pepler thought more of the bone might have been removed.

Dr. Boyd briefly discussed the case.

Dr. Bruce closed the discussion.

Dr. J. A. Temple presented (1) two ovaries in a state of cystic degeneration, which he had removed from a woman who had a fibroid of the uterus. (2) A non-adhesive pus tube which he had removed from a farmer's wife. There had been no symptoms. (3) A cystic ovary from a woman who had suffered from retroflection of the uterus and prolapse of the ovary. (4) A fibroid tumor of the uterus which was causing great pain.

Dr. Grasett referred to the second case which he had seen. Dr. Fenton discussed the last, which had been under his care.

Dr. Pepler discussed the diagnosis of pus tubes.

Dr. Oldright reminded the Society of a pair of pus tubes he had removed intact and presented at the Society last year.

Dr. Macdonald reported a case of amputation of the cervix uteri for carcinoma. The patient was a delicate woman aged 45, who had a number of children and had miscarried several times. When he saw her first, two weeks ago, the question was whether he should remove the whole uterus in which the mortality by the vaginal route is about 15 or 20 per cent., the mortality of amputating the cervix only being two per cent., and the result about as good as the more serious procedure. He decided to amputate the cervix. He thought it would add two or three years to the patient's life.

Dr. W. H. B. Aikins discussed the case.

The nominations for the ensuing year resulted as follows :—

President, Dr. F. LeM. Grasett; Vice-President, Dr. Geo. Bingham and Dr. W. H. B. Aikins; Corresponding Secretary, Dr. Herbert Bruce; Recording Secretary, J. N. E. Brown; Treasurer, Dr. W. H. Pepler; Counsel: W. B. Thistle, G. Boyd, H. Hamilton, G. Chambers and F. Fenton.

The Society then adjourned for supper.

---

*Chronic Cystitis.*—

R. Fluid extract golden-seal, 2 drachms.
Tincture gentian comp., 4 drachms.
Tincture staphisagria, 1 drachm.
Tincture cannabis indica, 1 drachm.
Syrup bitter orange peel, 4 ounces.

A teaspoonful three times daily.

—*Medical Fortnightly.*

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.

EDITOR:
JOHN L. DAVISON, M.D.
ACTING EDITOR:
J. T. FOTHERINGHAM, M.D.
ASSOCIATE EDITORS:

*Surgery:*
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine:*
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology:*
G. P. SYLVESTER, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics:*
CAMPBELL MEYERS, M.D.

*Pathology and Bacteriology:*
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat:*
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D.

*Pædiatrics:*
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M.D.

*Eye and Ear:*
G. STERLING RYERSON, M.D.
C. TROW, M.D.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* The Canada Lancet Publishing Co., 24 Wellington St W., Toronto.
FRED. H. GRAY, Business Manager.

**The Largest Circulation of any Medical Journal in the Dominion.**

## Editorial.

### HONORARY ASSOCIATES.

The Chapter of the Order of the Hospital of St. John of Jerusalem in England, with the sanction and approval of her Majesty the Queen, have appointed as Honorary Associates or members of the fourth-class of the order the following:—Hon. F. W. Borden, Minister of Militia; Dr. T. G. Roddick, M.P., President of the British Medical Association, and Major John McLean, President of the Canadian Press Association. The chapter has passed a special vote of thanks, and ordered it to be engrossed on vellum, to Dr. C. R. Dickson, local Secretary of the St. John Ambulance Association in Toronto. These distinctions are conferred for services in connection with the St. John Ambulance Association, the President of which is H.R.H. the Prince of Wales.

### ONTARIO MEDICAL ASSOCIATION.

There are abundant indications that the annual meeting on June 1st and 2nd will be one of the most interesting in the history of the Association. Its record is that of progress and usefulness of the highest order.

Not many years have elapsed since its inception, and so rapidly has its membership increased that to-day on its rolls are to be found the names of about one thousand of the practitioners of Ontario.

We would urge upon members the benefits that regular attendance confers, trusting that a word in season may have the desired effect, and hoping that the coming gathering may eclipse all its forerunners.

Interchange of scientific opinions and social conference cannot fail to make lasting impressions on the mind of the individual and to increase the solidarity of the profession. We have heard an occasional non-society-attending practitioner aver that he could reap more information from an hour's quiet reading at his own fireside than could be gleaned in a whole evening's discussion of medical topics. This is not the conclusion of those who have made a test of the opposite course, and can be set down only to lack of the necessary experience. The medical recluse is exceedingly apt to run mentally in ruts of his own forming; he may be a well read man; but, notwithstanding this, his patrons would reap not a little benefit were he to appreciate the practical results that follow intellectual converse and the incidental narration of personal observation. It is quite true that many find it difficult to escape from their arduous duties for even a couple of days; it will be well worth the sacrifice, and nothing is accomplished without personal effort.

Specially pertinent to these matters is the trite saying, "All work and no play makes Jack a dull boy." This applies with as much force to the city doctor as to him who pursues his daily and nightly rounds amongst the difficulties and self-sacrifices of a country practice, each hour a reminder that were he living and striving for self alone, the battle would be all but unendurable.

We have seen the programme which is being prepared. The papers to be read promise to be of the right sort, and arrangements are made for a larger number of set discussions than heretofore have been on the list, which, no doubt, will lend increased interest.

The Committee of Arrangements are hard at work providing for the comfort of the members and preparing for the extending of hospitality in such a fashion as will constrain each to say "It is good to be here."

The usual railway rebates on the return journey will, no doubt, be secured, so that the trip will be inexpensive.

Once more we counsel our readers to take advantage of the opportunity and swell the numbers. The Association is our own—let us foster it as we should and unexampled success is assured.

The following is the list of papers already promised for the coming meeting of the Ontario Medical Association which meets in Toronto, June 1st and 2nd:—

Syphilitic Cirrhosis of the Liver—Prof. J. G. Adami, Montreal; Dr. Jas. Bell, Montreal.

The subject to be discussed in Medicine is, The Relation of Excretion to Disease, led by Prof. H. A. Macallum, London, followed by Prof. H. B. Anderson and others.

The discussion in Surgery will be The Treatment of Fractures of the Skull, led by Dr. G. A. Peters, Toronto. Two or three other gentlemen have been asked to follow in the discussion.

The discussion in Gynecology will be Carcinoma of the Uterus, to be led by———, followed by H. S. Griffin, of Hamilton, and J. W. McCullough, Alliston.

The discussion in Diseases of Children will be on the subject of Enterocolitis, led by W. B. Thistle, Toronto, and followed up by R. J. Dwyer, A. Primrose, Albert A. Macdonald.

The Injurious Effects of Our Overwrought School System on the Health of Public and High School Pupils, R. Ferguson, London; Immunity, J. J. Mackenzie, Toronto; The Effect of the Climate of Our Canadian Northwest on Tubercular Patients, P. H. Bryce; Endometritis with Erosion of the Os, J. F. W. Ross, Toronto; The Early Removal of Tubercular or Necrotic Areas, H. H. Oldright, Toronto; The Traumatism of Labor, C. B. Oliver, Merlin; When Should we Operate, illustrated by cases and specimens, Wm. Oldright, Toronto; My Experience with Diphtheria During the Fall of 1897, Wm. Doan, Harietsville; Hyper-Resonance of the Chest a Premonitory Symptom of Tuberculosis of the Lung, W. C. Heggie, Toronto; The Medical and Surgical Treatment of the Insane, A. T. Hobbs, London; Cretinism in Ontario, A. McPhedran, Toronto; Some Details in Antiseptic Surgery, N. A. Powell, Toronto; Location of Brain Lesions—report of a case, H. D. Livingston, Rockwood; Experience with New Remedies, G. S. Ryerson, Toronto; Vicarious Urination, A. T. Rice, Woodstock; ——A. McKinnon, Guelph; A Brief Sketch of the Nervous System, of Its Liability to Injury, and of Some of Its Diseases, I. Byron Newman, Detroit; The Various Operative Methods of Dealing With Eyes Lost Through Injury or Disease, G. H. Burnham, Toronto.

## TRINITY MEDICAL ALUMNI ASSOCIATION.

Alumni Associations are proverbially known to be difficult to hold together, and especially is this the case in medical institutions, the graduates of which are dispersed far and wide, not only throughout any given country, but the world over. The annual meeting of the Trinity Medical Alumni Association for 1898 has been a source of encouragement to those interested, and there is every reason to believe that our graduates are awakening to the fact that such an organization can fulfil what is claimed for it, and form a pleasant and useful link between the present and the past.

It has always seemed most appropriate that the meetings of the Association should be held in the Convocation Hall of Trinity University, where many recollections of former days had their origin, and where the final triumph of the college course was recognized. Experience has, however, proved that for busy men a more central place of meeting was desirable, and this year the sessions were held in the Educational Department, which was kindly placed at the disposal of the society by the Honorable the Minister of Education, and we take this opportunity of gratefully acknowledging his kindness.

Some years ago it was proposed that a gold medal be offered by the Association, for the best thesis on some modern medical subject. This year, for the first time, the call was responded to, and it must be gratifying to the

College and Faculty to know that their graduates are doing such work as is evidenced by the theses presented. In all cases they showed most careful and conscientious work in laboratory investigation, and extensive research into literature. Judgment was passed upon these papers by Professors Adami, Ruttan, and Wyatt Johnston, of Montreal, to whose kindness the Association is deeply indebted.

The annual meeting was held on April 6th, Dr. Elias Clouse, President, in the chair.

The morning session was called to order at 10.45. Minutes and reports were read and adopted.

Dr. Leonard Vaux presented an abstract of his paper on "Indol, Indican, and Indigo Blue, and Their Clinical Significance," which had been awarded the Association medal. The remarks were of a most interesting and scientific character, and it is to be hoped that this research will help to clear up some knotty points relating to lardaceous degeneration. Time did not admit of discussion.

A paper by Dr. Grasett, on "Some Surgical Diseases of the Rectum," followed. This was fully discussed by Drs. Powell, Mitchell, Vaux, and others.

The meeting then adjourned for luncheon.

The afternoon session was called to order at 2.45 o'clock.

The first paper was by Dr. Henry Howitt, of Guelph, on "Some Points in Abdominal Surgery Relating to Intestinal Obstruction." Discussed by Drs. Bingham and Temple.

The visitors of the Association, Dr. Leroy Milton Yale, of New York; and Dr. Charles G. Stockton, of Buffalo, were then introduced by the President.

Dr. Yale's paper treated of "The Care and Modification of Milk for Infants' Use."

The speaker dealt minutely with the question of milk supply, and of milk contamination and its prevention. The practical interest of the paper appealed to every one, and was greatly enjoyed, but unfortunately there was no time for discussion.

Dr. Stockton's paper on "The Nature of those Joint Affections usually called Chronic Rheumatism," was warmly received, but in this case also discussion had to be abandoned, as the members were desirous of attending the Annual Convocation for the conferring of Medical Degrees at Trinity University. The Session then adjourned. Through the courtesy of the University authorities our guests occupied places among the Faculty during the Convocation ceremonies. It was pleasing to hear later of the interest they took in these old-fashioned ceremonies in which the graduates of Trinity take pride.

The evening session was held in the Rossin House. Sixty-seven members and visitors were present, Dr. Clouse in the chair,

An excellent banquet was provided, and the orchestra discoursed music during the evening. The toast-list opened with that to Her Majesty, and "God Save the Queen" was heartily sung.

Dr. Clouse then delivered his presidential address. He reviewed the work of the past year and foretold future success, and extended a cordial welcome to visitors and alumni alike.

The toast to "Canada" was responded to by Mr. E. E. Sheppard in a loyal and humorous manner.

The Association Medal was then awarded to Dr. Vaux by the President. Dr. Vaux responded.

The health of "Our Guests" was heartily drunk. Dr. Yale, Dr. Stockton and Dr. Charles O'Reilly responded.

"Old Trinity" was responded to by Dr. W. B. Geikie, as head of the Faculty; Dr. George Bingham replied for the graduates, and Mr. McGibbon for the undergraduates.

The toast to "The Ladies" was replied to by Dr. Shoemaker, and Dr. McEachern, of the Toronto General Hospital.

Dr. Clouse proposed the health of the President-elect, Dr. Howitt. Dr. Howitt replied.

The evening closed with "Auld Lang Syne." Between the toasts Mr. Newsome rendered several splendid songs, and Mr. Rood created much amusement with anecdote and dialect pieces.

The choice of visitors this year was a most happy one. The papers presented by Dr. Yale and Dr. Stockton were of a most interesting character and were thoroughly enjoyed by all; but apart from this, the personality and magnetism of the men themselves have left with us an impression not easily to be forgotten.

It is impossible to close without offering some tribute to the retiring President; Dr. Clouse, was one of the first, if not the chief of the promotors of this Association. From the time of its inception he has been a most energetic secretary, and the success of the movement thus far has been largely due to his untiring interest and zeal. His nomination for President a year ago received unanimous support, and the progress of the past year, and the gratifying result of this year's meeting, have fully justified his election. May the success of 1898 be an index of future progress.

The officers for the coming year are as follows:

President, Dr. Henry Howitt, Guelph.
Vice-President for Toronto, Dr. H. B Anderson.
Vice-President for Western Ontario, Dr. J. Shaw, Clinton.
Vice-President for Eastern Ontario, Dr. W. Shaw, Keene.
Treasurer, Dr. Geo. Elliott, Toronto.
General Secretary, Dr. H. C. Parsons, 97 Bloor St. West, Toronto.
Assistant Secretary, Dr. D. J. G. Wishart, Toronto.
Auditor, Dr. Norman Anderson Toronto.
Graduates' Representative, Dr. Rowan, Toronto.

H. C. P.

## EDITORIAL NOTES AND CLIPPINGS.

### EXAMINATIONS.

Following are some of the nuggets of wisdom from the June examination papers of the Pennsylvania Board of Medical Examiners. One man said that the "uriniferous tubules secreted the seminal fluid." Another

said that the "function of the optic nerve is to contract the pupil and move the eyeball." Another said that in "cerebral hemorrhage the patient may vomit the cerebro-spinal fluid." Another said that in case of a rigid os he "would decapitate or perform craniotomy, or would put on forceps and deliver at once." Another described a new method of doing a version; "he would put his finger in the child's mouth and bring the chin under the os pubis and hold his hand over the mouth to prevent the liquor amnia from choking it." And yet all these men had diplomas! —*Atlantic Med. and Surg. Jour.*

---

## TUBERCULAR PERITONITIS.

Holmes, in an article on this subject (*Annals of Gynecology*) gave these conclusions:

1. Tubercular peritonitis is a relatively common disease.
2. It is never a primary disease, though it is usually impossible to find the initial focus.
3. Recovery follows laparotomy as a general rule, unless there is an initial focus to keep up the disease.
4. This disease appears in three different forms—the exudative form, the dry form, and the ulcerated form, and they are recognizable in the order named.
5. Microscopical examination of the peritoneum is sufficient for a positive diagnosis. The demonstration of microscopical tubercles, or the recognition of the bacilli, are only confirmatory.
6. Puncture of the abdominal wall for diagnosis, or for the removal of ascites and injection of air, fluid or iodoform, is dangerous and should not be practised.
7. Laparotomy, with iodoform-gauze tamponade drainage, is the safest and most reliable treatment.
8. Laparotomy should be done as soon as there is a show of emaciation or when a relative diagnosis has been made.
9. A positive diagnosis can never be made before laparotomy.

---

*Phosphorus Poisoning.*—

Oil of turpentine, 10 grammes.
Mucilage gum Arabic, 250 grammes.
Syrup of orange peel, 80 grammes.

Take in three portions, and shake before using.

—VETTER, in *Therapie der Gengenwart.*

---

*Ivy Poisoning.*—Keep the affected parts well wetted with freshly made lime-water. Take a teaspoonful four times daily of:

R. Fluid extract couch-grass, 4 drachms.
Sweet spirit of nitre, 1 ounce.
Syrup of lemon, 1 ounce.

# Book Reviews.

## THE NERVOUS SYSTEM AND ITS DISEASES.

By Dr. Chas. K. Mills, Philadelphia.—
(Lippincott & Co.)

We have reviewed with much pleasure Dr. Mills' latest work and would confidently recommend its perusal to those interested in the nervous system, as it is thoroughly reliable and fully up-to-date in all particulars.

As stated by the author in the preface, the nomenclature and terminology advocated by Prof. Burt G. Wilder, of Cornell University, have, in the main, been used more largely than in any previous practical work on neurology, as he believes that the reforms advocated by this distinguished anatomist, especially the introduction of mononyms, are deserving of general adoption. In spite of opposition, sometimes of a bitter character, the author evidently feels that this nomenclature will, sooner or later, make its way. Mononyms are indeed coming into large use in some instances, it would seem almost unconsciously, and without any reference to Wilder or his advocacy of their use. Probably the majority of neurological and anatomical writers speak of pons instead of pons varolii, of pia and dura instead of pia mater and dura mater, while thalamus, callosum and even oblongata are obtaining a large following in this country and to some extent abroad. The unfamiliarity of students and physicians with many of the mononyms is of course an objection to their use, but their introduction into Gould's Dictionary of Medicine, which has obtained so wide a circulation, has largely obviated this objection. The author has given a brief section on terminology, a study of which will make the nomenclature familiar. This section includes three carefully prepared tables, two modified from similar tables by Wilder, and one entirely original (page 50). A careful reading of the book will show the ease with which the nomenclature and terminology adapt themselves to descriptive and other purposes. In the description of the position and relations of parts, the author has used, to a greater extent than in any other practical text-book, the terms which apply equally to man and the lower animals, and are based upon the six aspects of the normal position of the vertebral animal, namely: the cephalic, caudal, dorsal, ventral dextral and sinistral; terms derived from these words such as cephalic, cephalad, caudal, caudad, etc., are freely but not exclusively used. The use of dorsal and ventral instead of anterior and posterior is frequent.

The commonly accepted views regarding the "neuron" or nerve cell, considered as an anatomical unit, have received acceptance and full consideration and illustration. The new cellular terminology is discussed (pages 12 and 13). A considerable number of the diagrams are of the neuronal type, as in the more recent works on histology, anatomy and neurology, like those of Ramon y Cajal, Van Gehuchten, Edinger, Rauber, and Starr. Even the most recent and somewhat reactionary views on the nerve cells, those of Apathy have found some notice in a foot note near the end of the book. As here stated, according to Apathy, "the nerve cell is the producer of neurofibrils, while the ganglion cell produces the force which is to be conducted. Some of the neuroglia cells, of the leech at least, produce neurofibrils, some neuroglia fibrils, and some both kinds of fibrils. A neurofibril, which arises in a nerve cell, passes out of one of its processes, and may then traverse several ganglion cells, and finally end in or around a muscle or sense cell" (page 973).

In various parts of the work are recorded observations or investigations which have added to the list of discoveries in neurology

Under cerebral localization are recorded some observations which have been determinative or confirmative of the positions of certain functional areas of representation. Among these may be noted the localization of the centre for word-hearing, by the report of a case of lesions of the superior temporal convolutions of both hemicerebrums (page 346); of the localization of the naming centre by the record of a case of tumor of the meditemporal convolution (page 347); of the separation of an utterance centre

by the record of an area of softening just caudad of the left subfrontal convolution, the case being one of orolingual monoparesis with distinct paralysis of the lower face, no interference with propositionizing being present (page 638).

The work contains a large amount of original clinicopathological material, illustrating almost every phase of encephalic localization. Tumors of almost every portion of the cerebrum, of the cerebellum, of the basal ganglia, and of the pons and oblongata are recorded either in detail or by brief but sufficient reference. An important contribution to the subject of secondary degeneration and the functions of particular encephalic tracts is to be found in the record of a case of old thalamic and capsular lesion, in which, besides degeneration of the pyrimidal tracts, marked degeneration of the central tegmental tract was present; this probably being one of the first, if not the first, recorded case of this degeneration. The tract even up to the present, has been chiefly demonstrated by developmental investigations (page 562).

Summaries of important cases, or brief but apposite references to cases, are to be found scattered all through the book, and indicate the enormous material which has been at the author's disposal.

The sections on small gross lesions of the pons and preoblongata (pages 926-934) and on postoblongatal and oblongata-spinal lesions (pages 997-1005) are a new feature. Recognizing the fact that numerous special syndromes must be caused by lesions situated in these parts, in which so many structures are compacted into a small space, he suggests a series of readily-applied topographical schemes to facilitate the focal diagnosis of lesions of these regions. Some of the most interesting cases, either original or brought together from different sources, are to be found in these sections. The difficulties and mistakes of diagnosis in the cases cited are sufficient proof of the practical value of the discussion of lesions of these regions of the brain.

The bibliography of the book is complete, and one that does justice to the numerous sources of information from which the author has drawn. While this is true, scarcely any foot-note or other references are to be found on the pages in the text of the work. The author has, instead, a carefully prepared bibliographic index at the end of the book, covering 19 pages. In this index the authors' names are arranged alphabetically, the pages on which the names of the authors referred to appear are given in parentheses in bold face type, with also the name, date number, etc., of the journal or work to which reference is made. Whenever a name appears on any page, by turning to the author's name in the bibliographic index the reference can be obtained at once. By this method the continuity of the text is preserved, and the book is not marred mechanically, as is often the case in other methods of reference.

Carefully prepared tables, anatomical, physiological, clinical and diagnostic are scattered through the book, as, for instance, the table of synonyms of convolutions and lobules (page 50); the comparative table showing the constitution of the different sensory tracts and their homologues, modified from Vanlehuchten (page 105); table of the untoward effects of some of the more potent drugs (page 233); the table showing the most important symptoms in one hundred and sixty-nine cases of intracranial purulent deposits or accumulations (page 545) and the tables giving the differential diagnosis of such diseases as encephalic tumor, hemorrhage, softening, and some of the cerebral paralyses of children.

The section on symptomatology and methods of investigation has been carefully worked out from the author's experience in practice, and from his knowledge of the wants of students and practitioners, as well as those of specialists and semi specialists. He has not confined himself merely to a description of the methods of studying sensory, reflex, motor, vasomotor and other disturbances, but has given his personal views and methods regarding the studying and recording of cases, as illustrated by the paragraphs on general methods of study, mental examination, time relations of mental phenomena, stigmata, special methods of studying sensibility, reflexes, station and sway, and surface temperatures.

The section on postmorten examinations and the preparation of specimens has been brought well up to date by giving such methods of making autopsies as that of Dejerine, which is not well known, at least not in America, and by giving some of the newer methods of hardening and preserving.

The complicated and highly important histology of the cerebral cortex has been brought up to date by a careful presentation of the results and views of men like Ra-.

mon y Cajal, VanGehuchten and Andriezen in the chapter on encephalic physiology and histology.

An effort has been made to definitely outline the functions and lesions not only of the cerebral cortex, but of all parts of the encephalon, including the cerebellum, the basal ganglia and some of their subdivisions, the separate structures of the pons and oblongatas, and even special association tracts and regions.

Great attention has been paid to the diagnosis and differentiation of different forms of meningitis and encephalitis, hemorrhage, acute softening etc.

In the sections on electrotherapeutics and on general therapeutics the author has again drawn on his own experience in hospital and private practice, as well as on his studies of older and more recent literature. He discussed in a conservative way the therapy of animal extracts and substances, such as the serum antitoxine, thyroid preparations and nuclein, and pays particular attention to efficient dosage and the untoward effects of drugs. Many of the newer and more approved remedies are given brief attention with formulas and special methods of administration. While it is true that thoroughly educated physicians are supposed to be always prepared to prescribe useful preparations in a proper way, he evidently believes that special formulas can sometimes advantageously be suggested, although in this respect his views may not meet with the approval of all.

Under special diseases, as well as in the sections on general therapeutics in the introductory portion of the book, much attention has been paid to treatment. The directions as to treatment are definite and sometimes arranged under special heads. Under the cerebral palsies of children, for instance, the treatment of the initial period and of the residual conditions and symptoms are considered separately; under aphasia the medical and surgical treatment of the lesions producing the aphasia are discussed, and in addition some space is devoted to the methods of treatment by training; in encephalic hemorrhage, softening, tumor, abscess and other focal and diffuse diseases of the brain, the special measures both for the acute conditions, the symptoms following the attacks, and the residual affections are given; and the therapeutic indications in the acute and chronic affections of the cochlear, vestibular optic, ocular and other cranial nerves are detailed. The treatment of migraine is particularly full occupying several pages, and including the consideration of the hygienic measures, the treatment of the attacks and of the intervals between the attacks.

In no other work has the relation of the clinical history of the diseases of the cranial nerves and their correlated structures been so explicitly referred to different anatomical constituents of the apparatus of these nerves. In almost every case the lesions of these structures from the peripheral end organs to the cortical termini have been superficially studied, as will be seen by consulting the chapters and sections on diseases of the gustatory, cochlear, vestibular, visual, oculomotor and respiratory apparatus.

The original illustrations contain a large number of photographs of special cases of disease, diagrammatic, schemes of different portions of the nervous system and drawings and photographs of gross and microscopical studies in the pathological anatomy of nervous diseases. Almost all forms of cranial nerve disease are fully illustrated. The schemes of the cranial nerves and their correlated encephalic structures should be of special value. In this connection might be enumerated particularly diagrams showing the pheripheral gustatory apparatus (page 693); the diagram of the vestibular and cochlear nerves (page 710); the scheme of the nuclei of the nerves of ocular movement, and of their central and peripheral tracts (page 808); and the scheme of the trigeminal apparatus (page 853).

In a number of instances the illustrations when not original have been modified from illustrations taken from various sources, in order to carry out the intention of the author in teaching points regarding the subject under discussion. These remarks apply, for instance, to the illustrations of the nerve cells of special sense, Schafer modified from Retzius (page 21); to the scheme of the sensory pathway modified from Van Gehuchten, so as to show the termination of the sensory neurons in the thalamus (page 103); to the schematic diagram of the olfactory apparatus modified from Edinger and Koelliker (page 671); to the diagram showing relations of the internal capsule and other structures of the interior of the cerebrum to the convolutions of its convex surface after Stacey Wilson (page 405); to the scheme of the veins and sinuses after Macewen (page 305); and to various other illustrations modified from Quain. Wilder, Ed-

inger, Lenhossek and others. When the author uses well-known illustrations such as Gowers' diagram of the relations of the spinal nerves to the bodies and spinus processes of the vertebræ, the Ferrier-Quain encephalospinal and gangliated nerves, Bourgery's neuraxis, Ecker's views of the fissures and convolutions of the brain, the Schafer-Quain transactions of the spinal cord, and various views of the eye ground and of the visual fields in health and disease, these illustrations are those best adapted for the purpose in hand. He has not hesitated to use them, although in some instances they are not only not new, but have been somewhat frequently employed by others. This is in accordance with his evident purpose to make the work representative of the best neurology of the day, even in some instances at the expense of novelty in illustrations. While new illustrations are sometimes of the utmost value, and always to be desired when they are as good or better than those already in use, the effort is sometimes made to have novelty and copiousness in this respect, although the illustrations may not improve the character and authority of the teaching.

Attention has been paid to mechanical features which serve to make a text-book or treatise more useful to students and for physicians in search of information of a definite and exact character. The chapter and cross-page headings, and paragraphic caption have been carefully chosen. A well-defined subject is considered in almost every paragraph in the book.

---

THE PRACTITIONERS' HAND-BOOK OF TREATMENT, OR THE PRINCIPLES OF THERAPEUTICS. By the late J. Milner Fothergill, M.D., M.R.C.P., etc. Fourth edition by Wm. Murrell, M D., F.R.C.P.. etc. London, Macmillan & Co., Limited, 1897. Canadian agents, A. P. Watts & Co., 10 College St., Toronto.

We can think of no book to compare with this in interest and power. Especially to the practitioner who seldom has the chance of a chat with a professional brother such a work cannot fail to give genuine satisfaction In the editor's hands it has lost none of the originality and pungency of its brilliant author, and for shrewdness and common-sense, as "a work on medical tactics for the bedside, rather than the examination table," nothing will soon excel it. Some of the chapters are headed: Assimilation; Excretion; Body Heat and Fever; Inflammation; Anæmia Plethora, and Congestion; and at the close are some valuable remarks on Foods, the Management of Convalescence, and in conclusion a chapter on The Medical Man at the Bedside — J. T. F.

---

RELIGION AND LUST.—The Psychical Correlation of Religious Emotion and Sexual Desire. By Jas. Weir, Jr., M.D. 2nd edition '97, *Courier-Journal* Job Printing Co., Louisville, Ky.

This volume is not a monograph, as it is called in the preface, but a collection of studies in psychology, published in whole or in part separately on previous occasions. In literary style they are not deficient, though there are some words of Greek origin mangled in transmission to English, probably not by the author originally, but accepted by him. *Hetarism* for *Hetaerism*, or *Hetairism*, is a constantly recurring example of this. As to scientific merit, the sense of revulsion set up by this title at first glance soon disappears; but one cannot fail to be struck as he reads by the evident bias of the writer against accepted theories which involve the idea of natural depravity. He is sufficiently intrepid to attempt to establish the theorem that the worship of the generative principle, so widely disseminated among primitive peoples from India to the North Pole, and all around the globe accompanied as it invariably is by great obscenity and excess, is due primarily to religious feeling, and is not an attempt to justify to their consciences the indulgence of that physical appetite which in the human animal, as in all others, is the most imperious. His list of races, too, to whom the idea of a God, ghost, soul, or double, had not occurred, through lack of evolution, is faulty in the extreme. Such lists have been taken up *seriatim* time and again, as in Flint's "Theism," and shown to be incorrect, the original investigators being misinformed. Even the Australian black man, who has always been classed with the Fuegians, at the foot of the list of human beings, will reveal to the white whom he can trust some spiritual depths, or shallows, which are kept concealed from the stranger. The work is not one of great interest to the profession at large.—J. T. F.

# PUBLISHERS' DEPARTMENT.

Messrs. Lea Bros. & Company announce for early publication the following books, by eminent authorities, and will be glad to send full information and prices on application to either their Philadelphia or New York house:

DISEASES OF WOMEN.—A Manual of Non-surgical Gynecology, designed especially for the use of Students and General Practitioners. By Francis H. Davenport, M.D., Instructor in Gynecology in the Medical Department of Harvard University, Boston. Third edition, thoroughly revised and enlarged, with many additional illustrations.

---

A TREATISE ON GYNECOLOGY.—By E. C. Dudley, A.M., M.D., Professor of Gynecology in the Chicago Medical College, Chicago. In one octavo volume of about 600 pages, with 425 illustrations, many of which are in colors.

---

A TEXT-BOOK OF ANATOMY.—By American Authors. Edited by Frederic Henry Gerrish, M.D., Professor of Anatomy in the Medical School of Maine. In one handsome imperial octavo volume, copiously illustrated in colors.

---

THE TREATMENT OF SURGICAL PATIENTS BEFORE AND AFTER OPERATION.—By Samuel M. Brickner, M.D., Visiting Surgeon at the Mt. Sinai Hospital, New York. In one handsome volume of about 400 pages, with illustrations.

---

THE PRINCIPLES OF TREATMENT.—By J. Mitchell Bruce, M.D., F.R.C.P., Physician and Lecturer on Materia Medica and Therapeutics at Charing Cross Hospital, London. In one octavo volume.

---

SANMETTO AN INVALUABLE ADDITION TO OUR MATERIA MEDICA.—It gives me pleasure to state that Sanmetto at my hands has proven all that its manufacturers claim for it. I consider it an invaluable addition to our materia medica.

GRAND RAPIDS, Mich.

SCHUYLER C. GRAVES, M.D.
Dean, and Professor of the Principles of Surgery and Clinical Surgery, and Clinical Professor of Abdominal Surgery, in the Grand Rapids Medical College.

---

BLENNOSTASINE IN THE TREATMENT OF CORYZA.

In most cases we can cure a coryza with this agent in fourteen hours. But it is necessary that the patient remain indoors, and on going to bed he should have a good bath. The warm foot-bath, plus the employment

of Blennostasine, is attended with the best results. The patient will go as long as twenty-four hours with a coryza in this treatment. Concerning the treatment we should say that the remedy here advised has no property which deranges the secretions, and its action is not attended by any results which are in the least disagreeable. It is best to administer this remedy in doses of five grains in capsules, every two hours, when we are using to abort, or rather to speedily cure coryza.—*New Albany Medical Herald.*

## ANTITOXIN.

The use of antitoxin in the treatment of diphtheria is now almost universal. It is essential that the article used should be pure and up to the required strength. We notice that Mr. John Mackenzie, Official Bacteriologist of the Ontario Board of Health, has recently made a test of the antitoxin prepared by Parke, Davis & Co. The samples tested were purchased in the open market, and were found to be pure and above the strength stated upon the label—the bottles were marked as containing 1,000 units, but in reality contained between 1,200 and 1,500 units. As a result of this test, and in consequence of personal experience, we believe that the antitoxin prepared by Parke, Davis & Co. is a reliable article.

"JUST AS GOOD" is a statement often made when Scott's Emulsion is asked for, and the druggist tries to sell a cheaper article. Physicians should be careful, when prescribing Cod Liver Oil, to see that their patient gets Scott's. It is a strengthening food and tonic, remarkable for its flesh-forming properties. It contains Cod Liver Oil emulsified with the well-known and highly-prized Hypophosphites of Lime and Soda, so that their potency is materially increased.

Dr. Hamill, who conducts the Medical Practice Sale office at 88 Yonge Street, desires us to inform our readers that he could sell a few more good practices, either with or without property, at this season of the year, and that Physicians who wish to dispose of their practices ought to send their offers to him as early as possible.

## LUXURY IN BEDDING.

Travellers in Canada visiting the Ancient Capital have often remarked on the perfection of the bedding in the Chateau Frontenac at Quebec. It is said to be the most luxurious bed in existence, being made on sanitary principles, and embodying all the newest inventions in springs and upholstering.

It is the same bed as supplied to the Waldorf-Astoria, the Palace Hotel of New York, and was made for the Chateau Frontenac by the Alaska Feather and Down Company, of Montreal.

Dealers, private persons, or institutions wishing to receive a description and price-list of this bed may get it by writing to the Secretary of the Company at their office, 290 Guy Street, Montreal.

467

# The Canada Lancet.

VOL. XXX.] TORONTO, JUNE, 1898. [No. 10.

## ORIGINAL ARTICLES AND COMMUNICATIONS.

### ON THE CARE AND MODIFICATION OF MILK FOR INFANTS' USE.

BY LEROY MILTON YALE, M.D., NEW YORK.

(A paper read before the Trinity Medical Alumni Association at Toronto, April, 1898.)

In choosing a subject for a paper which was to concern children's diseases, I have thought it better to put aside things which might be more novel and take one which, while exceedingly familiar—even hackneyed—presents this of interest: that its consideration is a part of the daily work of every one of you who is a general practitioner. And if I speak of over-trite matters, I beg you will excuse it, because I suppose your problem to be the same as those which beset us in other large cities; and these things are among our most active concerns.

The advances in pædiatrics are so urgently the concern of all general practitioners, that I assume that most of you already are aware of all or most that I have to offer. But it has seemed, nevertheless, worth while to go over the subject again with you, hoping that by so doing I may help you systematize what is known to you, and to make more evident the gaps which remain, the filling of which is the work before all of us who are interested in the subject.

A distinguishing characteristic of the work of our time in this direction is its scientific character. As has just been said, the problem is of the oldest. Our latest methods are but the development of old ones; but it is the scientific precision of treatment which has made the success of the present time. If we take up recent work in regard to infant feeding, we may divide it into the finding of a standard of the composition of breast milk, similar determinations of cows' milk as the only practical basis for modification, endeavors to procure such milk in adequate quantities and at marketable rates, and finally the devising of accurate methods of modification of milk sufficiently flexible to admit of the preparation of a food to meet the needs of varying cases, and at the same time sufficiently simple to be employed by untrained persons.

I shall confine myself to the consideration only of the methods of procuring suitable milk for infant feeding, and the methods of its modification.

I will not weary you by any description of the manifold untidiness of ordinary dairies, nor with a consideration of the ways in which the milk

produced in them is unfit for infants' use. The legal standards of purity in milk have been made apparently rather to prevent intentional fraud, than to prevent disease. For the purposes of milk which we are considering, absolute richness of milk is of less importance than are some other qualities.

The many and various requirements given for good milk may, we think, be all grouped under the three headings given by Dr. Coit in a recent article on "Certified Milk":—

"First—An absence of large numbers of micro-organisms, and the entire freedom of the milk from the pathogenic varieties.

"Second—Unvarying resistance to early fermentative change in the milk, so that it may be kept under ordinary conditions without extraordinary care.

"Third—Having a constant nutritive value, of known chemical composition, and a uniform relation between the percentage of the fats, proteids and carbohydrates."

The first requirement covers many. Its fulfilment demands that the milk shall be clean in every way. That it shall be free from the dirt from the cow which is so constant—the hairs, the fragments of bedding, of dung, and what not; free from dust and other impurities from the stables and its surroundings, as well as the various kinds of dirt due to careless handling of the milk. Freedom from pathogenic germs demands that the cow herself shall be equally free. That she shall have no ordinary disease, and especially that she be free from tubercle. It further demands that those handling the milk shall be free from communicable disease, and that the milk shall never be brought into contact with anything which may have been contaminated. You will notice that absolute freedom from bacteria, except the pathogenic kinds, is not called for. This is a practical recognition of the fact that the first part of the milk usually does contain bacteria which have entered the teats or the udder from without. Also, that while the later milk, strippings particularly, is nearly or quite sterile the separation of the parts of the milk is not commercially practicable.

The second requirement largely depends upon the first. It demands the best possible handling of the milk, its perfect bottling, isolation and subsequent care. This requirement can be more perfectly fulfilled if the milk can be delivered in a very fresh condition and with but short transportation, although milk properly handled and cared for can be kept for a surprising length of time.

The third requirement of constant nutritive value calls for the use of herd milk (as against the milk of one or very few cows) to escape the derangement of the milk from any excitement whatever, especially that of rutting, which is notoriously damaging. It calls for good and uniform feeding, with a proper proportion of the nitrogenous and non-nitrogenous elements in the food.

The practical approach to the fulfilment of these standard requires a great deal of attention to detail. Measured by ordinary standards the milk supplied to New York city and its vicinity (and the district to which the Essex Commissioner's labors especially applied is included therein) is, I think, good, and a great deal is sold which is particularly good.

It is not only necessary for clinical purposes that the milk should be good, but that we should know it to be good, that we should know it to be pure, know it to be constant in composition, and know exactly what this composition is. Several dairies have endeavored to supply such milk, and they have set to themselves (some of them at least) the ideal of a milk which should be so pure as to need no sterilization. Their methods are essentially the same in kind. Many have contributed to the perfecting of details and have joined in a praiseworthy rivalry.

Without any disparagement of others, I wish especially to call your attention to the dairy under the control of Essex Co., New Jersey, Medical Commission, known as the Fairfield Dairy, because it has been preeminently the work of physicians, and because by it has been solved the question of good milk supply in a manner which has been since imitated elsewhere, and which is, as it seems to me, applicable to any large city—to your own if you so desire. The plan originated as far back as 1889, through the need of milk of a quality fit for clinical work, but not until 1893 did it take definite form. Dr. Coit, who as Chairman of the committee on Cows' Milk of the Medical Society of the State of New Jersey had done a great deal of work in this direction, then submitted to the Practitioners' Club, of Newark, a plan which was carried out. The plan was essentially a contract with a responsible dairyman, under which the latter, in return for the support of the medical profession, agreed to conduct his dairy in accordance with the desires and advice of a medical commission appointed by the Medical Society of Essex County. This plan was adopted, as the profession despaired of the proper enforcement of sanitary laws or of the keeping public opinion interested long at a time.

The Medical Commission have no pecuniary interest in the dairy, and receive no remuneration for their work. They establish the standards of milk and methods of procuring it. They are responsible for the frequent inspection of the dairy and the stock. They select the scientific experts, the veterinarian, the chemist and bacteriologist. The dairyman pays for all the expert work. I shall not detain you with the details of the contract, copies of which I shall hand to the secretary, but rather shall describe the actual methods as I have observed them at the dairy.

The herd had formerly quite a large admixture of Holstein blood, but since the adoption of the tuberculin test, which is applied to every cow bought, Jersey grades predominate. All cattle are bought subject to the tuberculin test and are returned if they do not stand it. As soon as they have passed they go to the regular barn, containing about 200 head. From this herd the best cows are selected by the veterinarians to recruit the "certified" herd, also containing about 200 head.

The stable is clean, dry, and constructed with a view to being kept clean. There is a cellar beneath which is used as an air space, not as a receptacle. The dung and other refuse is removed seven times, or oftener if necessary, in 24 hours, the watchman attending to this duty at night. It is removed to a receiving pocket which is suspended in the cellar beneath the stable floor. It tilts so as to load a cart instantly without any handling of the manure. It is entirely removed twice daily in iron carts. Floors are of hard pine.

For greater cleanliness a milking shed is building to accommodate twenty-six animals at once. It will be well-lighted, the sides being largely composed of movable glazed sashes. Floors of hard pine laid in tar. Side walls and ceiling made of sheet iron, painted, so that the whole may be flushed with water. The matter of floors has caused quite a little trouble, it being necessary to have a material without crevices which can be flushed thoroughly, but upon which the cattle will not slip. A cow is easily frightened, and if frightened becomes unmanageable.

Bedding is of rye straw, turned daily.

All feed and fodder is kept in separate barns away from the cattle. It consists of corn meal, wheat middlings, bruised barley sprouts, cotton seed meal, ensilage from matured corn, clover and timothy hay.

The water supply is from a spring guarded by a roof, and by sides of wire screen. The water is shown by analysis to be very pure, but for still greater safety driven wells are contemplated.

The cattle are groomed once each day and retouched about an hour before every milking. The cow's belly and udders are brushed by an attendant, who does it in advance of the milker.

The cattle are out of doors from two to seven hours daily, according to season and weather.

The workmen are mostly Poles and Hungarians with families in Europe. They are susceptible to training, are clean and temperate in their habits. They are examined physically by a local physician once or twice a month. Not going from the place, and being temperate, there is little chance for gonorrheal contaminations. Tubercular subjects, or those with skin affections, are excluded, and when actually ill are quarantined until seen by the physician in charge of them. This physician renders reports to the Commission.

The workmen all wear white duck suits and caps, which are changed and sterilized daily. The milkers have elbow sleeves when milking. The forearms and hands are carefully washed and the nails cleaned before milking, and the hands are rewashed with every full pail, *i.e.*, about every second cow.

The milk-pails are of block tin, the top soldered to the edge of the pail leaving only a circular opening about 7 inches in diameter, which is filled by a fine brass wire gauze disc, upon which the milk falls in milking. The pails are sterilized in the large sterilizer at the dairy house under 5-pound pressure, equivalent to a temperature of 226° F.

The milk is poured into sterilized 40-quart cans, which are sent over a suspended wire cable to the dairy house about 200 yards away, being received into the second story of the building. It is immediately put into a large strainer of white metal which contains two filtering layers. The upper consists of several thicknesses of sterilized gauze, beneath which is a wire netting, the lower of a layer of absorbent cotton. This filtering only removes visible particles, but not bacteria. From this filter it passes immediately to the cooling coil. This consists of twenty-one tubes carrying spring water of the temperature of 51° F. and twelve tubes of ice-water. The coil is carefully sterilized just before using with a hose bringing steam directly from the boiler in great quantity. This has suffi-

cient force also to wash down all dust. The walls and floors of the room are also sterilized by steam and the floors are kept moist. The milk goes over the outside of the coil and is aerated as it goes. It is delivered at a temperature of 38° F. into a trough leading to a filter of metal, lined when in use with layers of sterilized gauze. The spring water is not wasted, but passes on through pipes to the stable for use there.

From the filter the milk passes to the bottles, eight bottles being filled at once. The bottles are stopped with a wad of paste-board, sterilized in an oven at about 160° F. for 20 or 30 minutes. This wad bears the date of milking. The whole is covered with a metal cap to exclude dust, droppings and melted ice. The cap carries the certifying stamp and the injunction "Keep between 40° and 50° F." The bottles are immediately packed in partitioned boxes and covered with broken ice, and are ready for distribution. No milk is sold more than eighteen hours after milking.

Bottles are washed in soap-stone tubs in three waters, by hand, and examined before sterilizing. All bottles from houses where contagious diseases exist are brought in separate wagons, and are all boiled before washing and sterilizing. They are then put into a sterilizing chest, the door of which is fitted with steam-packing, and is screwed tightly into place. Steam is turned in and kept at a pressure of five pounds, giving a temperature of 226° F. In twenty minutes the bottles are completely sterile. When they are placed upon the filling table they are covered with a sheet of sterilized duck to keep out any droppings.

The precautions taken to ensure good milk are essentially the same for both herds; but the "certified" herd is composed of selected cows, which are examined by a veterinarian every two weeks. The milk is examined as frequently by the chemist and bacteriologist; the Medical Commission inspects every detail thoroughly monthly. If all the examinations and inspections are satisfactory the Commission "certifies" the quality of the milk. Periodically-printed copies of these certificates with the analyses which have been made are sent to those interested in such matters. These are of great assistance to physicians as giving him exact knowledge of the constitution of the milk he is using. The milk from the general barn may be equally good; but the examinations and details by means of which the quality of the "certified" milk is determined are costly, and the milk must be sold at a higher rate.

There need be no complaint of this. If one considers the nutritive value of milk as against that of any other food, it is doubtful if there is any other cheaper, even at high prices. If one considers only foods suitable for the digestion of infants and young children, milk has no competitor on the ground of economy. Common milk which the farmer sells for less than the cost of proper feed ought not to be considered at all as infants' food.

In 1895 a medical committee in Buffalo, being aroused by the investigations of Mrs. Williams into the quality of the city milk, organized a system of certified milk, following in the main Dr. Coit's lines, with very satisfactory results, not the least of which is the arousing of other dairymen to the need of cleanliness in their methods.

In New York city, the West End Medical Society has in contemplation a contract with the Walker-Gordon Company closely following that of the Newark Society, with such alterations of details as seem to the parties to give still greater safeguards to the milk.

I have dwelt upon the details of pure milk production because it lies at the bottom of all infant feeding, and because I believe that the methods which have proved successful in Newark and Buffalo would prove equally useful in cities of similar size.

The Milk Laboratories in the few (7) years that they have existed have been of prime importance in the systematizing of infant feeding. As you all know, they are the result of the enthusiastic labor of Dr. Rotch, of Boston, and of Mr. G. E. Gordon, now of the Walker-Gordon System of Laboratories, already mentioned in connection with endeavors to secure pure milk.

I shall not dwell upon the details of laboratory work, because where laboratories exist these details are carried out by trained clerks, and while interesting in themselves they directly concern us only as do the details of pharmacy, for instance. The general plan of a laboratory of the present type calls for such arrangements as guarantee the most scrupulous care of the milk after its receipt; the testing of it for its fat value, that being the variable element. Such testing is generally done with the Babcock milk tester, which is in effect a magnified centrifuge. The milk is then separated by the ordinary Centrifugal Separator into a cream of a standard fat value and a residual milk. The fat standard for cream adopted in the Laboratories is 16 per cent., the fat being nearly all removed from the residual milk. Rotch's analysis shows the following percentage:

| | Fat. | Sugar. | Proteids. |
|---|---|---|---|
| Cream..... | 16.00 | 4.00 | 3.60 |
| Separated milk..... | 0.13 | 4.40 | 4.00 |

You cannot fail to notice how nearly the cream preserves the sugar and proteid values of the whole milk, a fact which has been much utilized in making foods at home, the cream being accepted as "a superfatted milk."

Besides the cream and the milk there is needed sugar, which is kept in the form of a 20 per cent. solution of milk sugar in distilled water. Lime water is used to correct the acidity of the mixture.

I need not detain you with a description of the methods of cleansing and sterilizing of apparatus and bottles.

If you desired to use the Laboratory for the benefit of one of your little patients, you would fill out such a prescription blank as this which I hand you. After it is taken to the Laboratory and recorded, a copy goes to the dispensing clerk, who combines from his standard materials the proper quantities to give to the total mixture the proportions of the various ingredients which you have ordered. The mixture is then divided into the number of bottles called for, they are stopped with absorbent cotton, placed in compartment baskets made to fit, sterilized at the temperature directed, and delivered and "empties" gathered at the same time. The latter basket and bottles are cleaned and sterilized when

brought back to the Laboratory. Of course, there is a limit of richness or attenuation in any and all of the ingredients, beyond which it is not possible to pass on the present basis, but these limits, I think, are never practically reached.

It would carry me far beyond my proposed limits if I were to go into the matter of special prescriptions. If there be anything which has been made especially clear by these precise methods of compounding infant food, it is the different digestive power and different needs of individual infants. And it is the ability to ascertain, experimentally, these idiosyncrasies, and to meet them by variation of the separate elements of the food, which constitutes one of the greatest benefits of the milk laboratory.

A few general suggestions regarding prescribing may be admissible. The wide variation in the fat and proteid values of mother's milk has already been mentioned. If the milk of the mother was agreeing with the infant so far as it went, its composition, if known, would probably fairly serve as a guide for the composition of the modification to begin with. I shall presently speak of some methods of determination within the reach of the general practitioner.

If the analysis of the breast milk cannot be had, then the average composition of breast milk must be our starting-point. But let me urge you to begin with percentages below this standard. For not only is it probable that the breast which has failed had before entire failure been producing an inferior milk, which has accustomed a digestion otherwise feeble to little labor, but we also know, practically, that a milk modification theoretically correct is very often indeed not so well borne as one of lower percentages. As regards the proteids, we can see a reason for this in the different digestibility of the coagulable albuminoid, casein, which predominates in cow's milk, and the soluble albuminoid, lactalbumin, which predominates in human milk. But for the greater acceptability of low fats and low sugar a reason does not so readily present itself, unless it be a difference in the constituents of human and cow's milk unrecognized by chemical and microscopical examination, but physiologically very perceptible to the infant's stomach. However this may be, the fact that low percentages are desirable at the beginning of artificial feeding, and above all in gastro-intestinal derangements, accords with the experiences of most of us who, as the phrase runs, have become accustomed to "think in percentages."

The advantages of the Milk Laboratory are evident. First of all, as now conducted, the best of milk, both as to purity and uniformity, is assumed as the basis of modification. Next is the great advantage of accuracy in the work. With extemporaneous mixtures, even if conceived in the main correctly, we very often indeed find something still unsatistory. But what is it? We may guess but cannot know. With mixtures of known constituent values we can change now this and now that with precision until we have reached a satisfactory result. We know each change in composition, we mark each resulting change in symptoms, we see cause and effect clearly presented, and we come to see our way surely.

No one, I presume, certainly no one of experience in this method, pretends that infant feeding has become a simple or an easy thing. But it is claimed that it is now possible to work intelligently and with precision

rather than haphazard or by guess. These characteristics, purity of material, precision and flexibility in modification, are the chief grounds upon which many physicians—some thousands already—have in the chief cities of the United States and Canada based their approval of the Milk Laboratory.

There is another way, I think, in which the Laboratories have been even more useful, although indirectly. Through their work those physicians who cannot avail themselves of the Laboratory facilities are enabled to "think in percentages," and to intelligently work out schemes and formulas for the home-modification of milk with a confidence and certainty, and, I believe, a success they never before possessed. If there be no Laboratory within reach the physician must depend upon himself, and often when it is within reach, through mistaken ideas of economy, or from less creditable motives on the part of the parents, he is unable to avail himself of it. But practically, for one reason or another, from want of the Laboratory or want of means, most infant's food, if of modified milk at all, must be home-modified. Therefore the question of home-modification becomes in the wider sense the most important of all.

For home-modification one must be his own Laboratory in all things, and must begin by securing as sound a milk as possible. If such a dairy as we have described is at hand, the quality of the milk may be accepted, and if its analyses are published, the necessity of private analyses is removed. Otherwise, unless the dairy possesses a Babcock tester, it is best to test the milk oneself. For the purpose, Holt's tubes, designed for breast milk, may be used. But better, I think, if you have a clinical centrifuge, is the tester described by Dr. Emily Lewi, which is but a miniature Babcock. This may be also used to determine the fat value of ordinary creams not exceeding 15 per cent. As before said, the proteids and sugar are so constantly near the average, that, the fat being determined, the other ingredients may be assumed at the average value. If you can get no analysis, it is fair to assume for a good milk from a herd of common cows the percentages of fat 4., sugar 4.25 to 4.50, proteids 4., salts 7.

Various plans of household modification have been devised, all intended to render easy the calculation of each ingredient. But all depend upon the assumption of certain fixed fat values in cream. This is different for separate creams, according to the speed of the separator, and gravity or raised cream, of course, varies according to the time the milk has stood. I shall give a few of the methods of calculation which seem to me most generally useful. Dr. Holt gives the following table of analyses, from which it appears that variation of the sugar and proteid values may be practically disregarded:

| | WHOLE MILK. | CREAM. | | | |
|---|---|---|---|---|---|
| | | I. | II. | III. | IV. |
| Fat | 4.00 | 8.00 | 12.00 | 16.00 | 20.00 |
| Sugar | 4 30 | 4.30 | 4.20 | 4.00 | 3.80 |
| Proteids | 4.00 | 3.90 | 3.80 | 3.60 | 3.20 |
| Salts | 0.70 | 0.70 | 0.64 | 0.60 | 0.55 |

He finds that a quart of good milk, standing in ice or ice-water for four hours, gives about 10 oz. of 8 per cent. cream, or in six hours 6 oz. of 12 per cent. cream. With these two kinds and plain milk, together with solutions of milk sugar of the strength of 5, 6, 7, 8 and 10 per cent., nearly all of the modifications usually needed may be made.

But it will, of course, be seen that in every modification the relation of the proteid percentage of the fat percentage must be the same as in cream from which it was modified. To give greater elasticity, Dr. Westcott, of Philadelphia, proposes to work out the problem by assuming a proteid value of the combined milk and cream, and thence calculate the amount of cream, milk, etc., necessary to make the required modification. His working formulæ have been somewhat simplified by Drs. Harrison and Roby of New York.

The fixed proteid value of combined milk and cream is assumed to be 3.90 per cent. if 12 per cent. cream, 3.80 for 16 per cent. cream, 3.60 if 32 per cent. cream be used. With these constants in the formulæ,

P = desired proteid percentage.
Q = total quantity in ounces of mixture desired.
X = quantity in ounces of cream and milk.
F = desired fat percentage.

The formulæ will be

(1) $3.90 : P :: Q : X.$

Skipping intermediate formulæ

(2) $C = \frac{Q.F - 4x.}{8}$

(3) $M = X - C.$

I have taken the liberty to add to these, following Dr. Westcott's suggestion, the following, in which

S = number of ounces milk sugar.
L = desired sugar (lactose) percentage in mixture.

$$S = \frac{Q.L - 4.40\ X}{100.}$$

The 12 per cent. cream is obtained by Dr. Westcott in the same way as by Dr. Holt.

Dr. Bauer, of New York, offers the following formulæ in which

Q = desired quantity (in ounces).
F = " percentage of fat.
S = " " " sugar.
P = " " " proteids.

(1) Cream (16%) $= \frac{Q \times (F - P)}{12}$

(2) Milk $= \frac{Q \times P - C.}{4}$

(3) Water $= Q - (C + M).$

(4) Dry milk sugar $= \frac{(S - P) \times Q.}{100}$

If 12 per cent. cream be used, make denominator in formulæ (1) 8; if 20 per cent. cream make denominator 16. That is to say, the denominator will be four less than the fat percentage of the cream used.

The two sets of formulæ produce results not far apart. Thus, to make 40 ounces of food with percentages, fat 3, sugar 6, proteids 1.50, one would take, approximately, by Westcott's formulæ of

| | | |
|---|---|---|
| Cream (16%) | 4.75 | ounces. |
| Milk | 11.00 | " |
| Water | 24.25 | " |
| Sugar | 1.75 | " |

By Bauer's formulæ

| | | |
|---|---|---|
| Cream (16%) | 5.00 | ounces. |
| Milk | 10.00 | " |
| Water | 25.00 | " |
| Sugar | 1.80 | " |

Dr. Coit of Newark has devised a decimal method in which he makes use of the metric system, allowing just 30 c.c. to a fluid ounce. It is based upon standardized 10 p.c. materials, *i.e.*, a ten per cent. cream and a ten per cent. sugar solution. Ordinarily a 15 p.c. gravity cream is diluted with a half volume of water to make a 10 p.c. cream. If very low proteids are needed, a centrifugal cream of higher fat percentage may be diluted to the 10 p.c. standard.

Everyone will work best with the formula he is most familiar with. Having selected your method of calculation and written your prescription, which, unless you are exceptionally blessed as regards memory, you should keep on file, you will give the mother or nurse the working formula, and you will usually need to give at least one lesson in the art of mixing and in the rudiments of laboratory tidiness.

If you are not perfectly sure of the quality of the milk, you would best have her filter it, on receipt, into her own sterile (boiled) jars, and set it to raise the cream. I prefer this raised cream to separated cream as ordinarily delivered, because of the great and unnecessary irregularity of the fat value of the latter. I have found it to contain all the way from 15 per cent. to 35 per cent.

It may be proper to mention here that in the difficult case of being obliged to use the milk of one cow in untidy surroundings, I believe that the safest plan will be to milk the strippings directly into a bottle or jar which has been thoroughly cleaned by boiling. These strippings may be practically treated as milk with double fat percentage. By diluting with boiled water and sweetening properly a mixture may be made which will serve in an emergency, and I have known it to do very well indeed in some instances.

Milk sugar can be best measured with some vessel holding a given weight, made for the purpose. The ordinary tablespoon, if dipped full of sugar and the excess taken off with a knife blade, will hold about two drams; if the sugar be packed into it with the knife blade it will hold three drams. A siphon is exceedingly convenient. It may be made of a length either to withdraw the milk, leaving the cream, or the reverse. The former is better. A graduate is essential, one of 8 oz. or 16 oz. capacity

being the most generally useful. Bottles and absorbent cotton for stoppers of course you must have.

If you are to sterilize or Pasteurize, the Arnold Sterilizer or the Freeman Pasteurizer will be found most convenient, but sterilization can be done in any cooking steamer. Whether the mixture shall be sterilized is a vexed question. On the one hand are presented bacteriological studies and some clinical experiences to show that milk cannot be made safely sterile for infant feeding below 90°C (=184°F), and that 100°C (212°F) is better; that with pasteurization 75°C (167°F), or lower, accidents frequently happen to the milk, and not infrequently gastro-enteric disturbances, more or less acute, occur, due to milk-poisoning. On the other hand, there is a growing distrust of sterilization and even of pasteurization, as a possible cause of malnutrition, especially of scurvy.

Now, there is no doubt that both sides present facts, but it seems to me that much depends upon the point of view. The necessity of thorough sterilization at high temperature seems to be most held by those having large outdoor clinics, where the difficulty of enforcing details is greatest. Those having affairs more in hand see the other side more clearly. There is no doubt that the one party can show cases of peculiar susceptibility where uncooked milk prepared in the best laboratories cannot be digested. The other party produces, as I myself can, cases of scurvy in which the cessation of symptoms followed the cessation of the sterilization.

Personally I follow no fixed rule, being guided in each case by an estimate of the greater probable danger of gastro-enteric troubles on the one hand, or of some form of malnutrition on the other. Whatever increases the chance of bacterial contamination or multiplication, whether poor milk supply, want of reliability of those in charge of the food, heat, unsanitary surroundings or what not, is an argument in favor of sterilization, and the thoroughness of the sterilization is to be in proportion to the probabilities of contamination. Practically, in cities, the ordinary milk supply must all be sterilized, at least in warm weather.

In the foregoing I have hoped to make evident the following points:

1. That the securing of a pure and uniform milk supply is the fundamental factor of infant feeding.

2. That the best method thus far devised for securing it is through committees of medical men, as few other persons have at the same time the knowledge and interest necessary to rigid care of details.

3. That such milk can be modified in such a manner as to make food suitable for almost any infant.

4. That this is most perfectly and easily accomplished through well-managed milk laboratories, but,

5. That it may be satisfactorily accomplished even under adverse circumstances by following, as carefully as possible, the methods of laboratories.

---

Entero-Cutaneous Fistlua.—Dr. Bonnet reports a case of entero-cutaneous fistula, due to ascarides lumbricoides, in a child of seven years. Intestinal perforation, localized tympanites, abscess, and peri-umbilical fistula, due to the migration of thirty-five ascarides.—*La Médicine Moderne.*

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,
Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

## RENAL CALCULUS.

BY J. H. MUSSER, M.D.,

of Philadelphia. Assistant Professor of Clinical Medicine of the University of Pennsylvania.

In referring to the clinical aspects of renal calculus, or nephrolithiasis, I wish to call attention to features essential in the diagnosis, which are somewhat at variance with the statements in text-books. A more extended review of the relation of hematuria to renal calculus will be given and the value of this symptom in other affections considered. A few words will be offered concerning the treatment. The subject-matter is the resultant of personal experience, and subject to the limitations of a small number of cases.

The term "renal calculus," as a subject for discussion, is well understood. It might have been better to use its synonym, nephrolithiasis; far better to have said "stone" in the kidney. The presence of stone or gravel in the pelvis of the kidney may be unattended with any subjective or objective symptoms. I exhibit a large calculus found in the body of a patient on the dissecting-table. In the Philadelphia Hospital, in 1887, an aged negro died of debility. He had not any organic disease that could be determined; a large dendritic calculus was removed from the kidney. It filled the pelvis and the calices, forming a complete mould of the cavity of that organ. It must have been present for many years, during which he never complained of pain. Such calculi may set up ulceration and a perinephric abscess, as in the case of H. G., aged 69. There were never any symptoms of renal calculus and no pyuria. Such conditions are rare, however, but are not likely to be overlooked at the present time if the centrifuge is used in urinary examinations.

The symptoms ascribed to the presence of a calculus in the pelvis of the kidney are *pain, intermittent hematuria, pyuria, pyelitis, renal intermittent fever, frequent micturition* and *renal colic.*

Before discussing the symptoms of stone *seriatim,* a word as to the frequency of the affection and as to some etiologic data of aid in the

diagnosis. It cannot be said to be a common affection. I have the notes of 29 cases in private practice, and of 11 in hospital practice; 13 cases only have been treated in the Presbyterian Hospital during a period of more than 25 years, during which time over 8,000 cases of all kinds were treated. Of course, it must be borne in mind that renal, as well as vesical, calculi are more common in some countries—depending on the character of the water—than in others. It is undoubtedly a disease of the middle and upper classes. This is particularly true of uric-acid calculous disease. It is not, however, a disease of the old or the very young in my experience. The youngest subject I have treated was 25 years of age; the oldest, in private practice, was 54. H. G., above mentioned, a patient at the Philadelphia Hospital, was 69. With the exception of the patient of 25, and the one aged 69, the ages ranged from 35 to 55. The youngest patient in the Presbyterian Hospital was 19 years of age. His attacks began 3 years before, or at 16. Twelve of my private patients were of the female sex, 17 of the male sex; 9 of the 13 in the Presbyterian Hospital were women. There does not seem to be much difference of frequency in the two sexes. Most authorities, however, hold to the preponderance in women, the ratio being as 3 to 1. But 2 of my patients could be said to have led an active out-door life. One was a stone cutter, the other an out-door salesman. The others were professional or business men following sedentary in-door lives, or women. One poor fellow was confined to the house with pulmonary tuberculosis. Fortunately, the small calculus I present to-night was passed without much pain.

### SYMPTOMS OF RENAL CALCULUS.

PAIN—My experience accords with that of all observers, who state that pain of the affected organ is the most constant symptom, and that this pain is increased by movement, by jolting, and by pressure. Indeed, pain induced by pressure is of as great significance as spontaneous pain. It frequently is persistent, and even continues in any position assumed by the patient.

The woman from whom these large calculi were removed had pain over the right kidney, behind and along the margin of the ribs anteriorly. This pain continued for weeks, from time to time, without the other phenomena of renal colic. It was of a *bursting* character at these times, and attended by a great sense of tension. It was rendered bearable by lying on the right anterior aspect of the body, with pillows underneath to produce counter pressure. Notwithstanding the subjective sensation of a swollen mass, no tumor could be felt at any time Mr. P. would have at one time a pseudo lumbago, or a pseudo-pleurisy; at another time an hepatic disorder because of the variability of the pain. Always, however, a firm punch would bring out the renal origin. In the case of Mr. L, the pain was 2 in. above the transverse umbilical line and 1 in. to the right of the median line. The surface was the seat of hyperesthesia.

This is not an unusual point of pain. It is, it must be remembered, lower than the gall-bladder region on the right side. We do not forget teat pain in the localities mentioned occurs from renal hyperemia, nephritis, pyelitis, tumors, and malignant disease, or from myalgia of rheumatic or other causation. Indeed we have seen renal pain and hematuria in a case of commencing appendicitis. The pain of renal calculus (not renal colic, please remember) comes and goes and is more commonly intermit-

ting and paroxysmal. Very frequently, however, it is constant and localized either in the region over the kidney, or anteriorly in the region mentioned. In my experience, it comes on during the day, and particularly the after part of the day, and not, as Jacobson would have us believe, at night. That it may occur spontaneously is not so much a peculiarity of renal calculus as that it can be excited by pressure, movement, etc.

Pain is of more diagnostic significance in renal calculus than in any other renal affection. It must be studied closely to determine its value. Every attribute that has been applied to pain belongs to the pain of renal calculus. Remote but related areas and nerve-courses join in the pain-chorus. Its very vagaries render its presence one of the most valuable signs of renal calculus. Its behavior, however, is often like the flitting nerve-aches of hysteria, and we must see to it that this counterfeit is not passed upon us. Not alone may urinary phenomena serve for the distinction; he who does not look to other neurotic manifestations or seek for the stigmata of hysteria will surely rue the day. To add to the difficulty the pain may be aggravated by the function of menstruation and even bear close relationship to it.

HEMATURIA.—Hemorrhage from the kidney is the classical symptom of stone. Indeed, we believe it is the most constant and positive symptom of renal calculus. Prior to the use of the centrifugal machine, blood no doubt escaped the eye of the observer when in small amounts, partly because it was destroyed as the urine advanced in decomposition during the period it was set aside for the deposition of its solid elements, and partly because the fewness of corpuscles rendered them difficult to find. But other causes of hematuria exist and are well known. Excluding all causes outside of the kidney, *i.e.*, of vesical and ureteral origin, renal hematuria may be due to congestion and inflammation, to infarctions, to new growths, to tuberculosis, to renal calculus and to parasites. The fevers and infections, and scurvy, purpura, leukemia and hemophilia are responsible for a number of cases. The very great importance of the relations of hematuria to renal calculus has induced me to ask your consideration of the result of the studies of the urine during the past six years. During this time 2,923 samples of the urine of 1,997 persons were critically examined. Blood was present in 364 cases; 20 of the cases of renal calculus which I have had under observation in private practice—in all of which blood was found—were studied by the aid of centrifugation, and of them I will speak specifically later. The presence of blood, it may be said in passing, was determined by microscopic examination alone. No reference will be made to chemical and spectroscopic examinations. The illness of the 264 patients in whose urine blood was found may or may not have been the cause of the hemorrhage. Yet in all cases save 20 the cause of the patient's illness could account for the blood directly or indirectly. Thus while gout, rheumatism or arterio-capillary fibrosis does not directly give rise to renal hemorrhage, the discharge of the urinary salts accompanying these affections undoubtedly inflicts trauma sufficient to produce it. It is thus seen that we must look to the accompaniments of the disease rather than the disease to explain the renal hemorrhage. In the following table the various affections of particular organs are

grouped together for the sake of brevity. It is seen that hematuria occurred in

| | | | |
|---|---|---|---|
| Gastric disorders | 35 | Neurasthenia | 5 |
| Rheumatism | 28 | Anemia | 5 |
| Chronic Bright's disease | 24 | Typhoid fever | 5 |
| Unknown | 20 | Tuberculosis | 2 |
| Renal calculus | 28 | Appendicitis | 1 |
| Arterio-capillary fibrosis | 19 | Jaundice | 1 |
| Acute Bright's Disease | 18 | Tonsillitis | 1 |
| Pregnancy | 17 | Erysipelas | 1 |
| Vesical disease | 17 | Diphtheria | 1 |
| Valvulitis or cardiac dilatation | 13 | Goitre | 1 |
| Catarrhal fever | 9 | Bronchitis | 1 |
| Gout | 8 | Gastro-intestinal catarrh | 1 |
| Pneumonia | 5 | | |

A closer analysis of the table will show that the hematuria resulted from congestions or hyperemias (pregnancy, goitre, heart-disease, the fevers, infections and jaundice) in 56 cases. In 42 cases the hematuria occurred in the course of acute and chronic Bright's disease, and in 19 more in arterio-capillary fibrosis, being, either of renal or cardiac origin. Gastric disorders, rheumatism in many forms, gout, neurasthenia and anemia account for 81 of the cases, conditions always associated with the copious discharge of urinary salts. Vesical disease accounts for 17 cases, renal calculus for 28, and in 20 the diagnosis was not noted at the time and is forgotten.

A study of the urinary salts and their relation to the renal hemorrhage is not without interest. In 250 of the patients with hemorrhage the presence or absence of the urinary salts was noted. Of these, in 90 uric acid alone was found; in 49 uric acid and other salts; in 17 oxalates alone, in 19 phosphates alone, in 4 oxalates and phosphates were found. In 71 it was stated there were no salts. The abundant urates and oxalates could without doubt be the cause of the hemorrhage in many instances in which they were found, notably in the gastric, rheumatic, gouty, anemic and neurasthenic cases. The cases without salts afford other reasonable explanation in most instances. Thus 14 had bladder or ureteral disease, 11 had renal calculus, 12 were the victims of some fever, 4 were pregnant, 7 had some form of heart disease, 7 Bright's disease, 8 rheumatism or gout, 7 gastric affections, 7 cannot be accounted for, as setting down the diagnosis was neglected. Appendicitis and jaundice account for one each. Of course, urinary salts producing trauma might have been passed at a micturition previous to the one which the urine examined presented.

It will be noted that all the cases of renal calculus had hematuria. Indeed I am convinced that it is the one constant symptom of this affection. Moreover, I believe it is not an intermittent phenomenon alone, but one that is constantly persistent. The cases which I had the opportunity of studying over a long period of time present this interesting feature—persistence of hematuria. It is true some specimens would be free, but a study of the urine week after week would invariably show persistence of the hematuria. As long as a calculus exists in the pelvis of the kidney, not encysted, we shall find hemorrhage. It is true it may

be in small amounts and not detected unless sedimentation is done by centrifugal apparatus. A few corpuscles only may be found, but one alone means hematuria. In other cases the hemorrhage is free and can be observed by the naked eye. Note particularly that this hemorrhage occurs independently of pain or any of the phenomena of the passage of a renal calculus. Note, too, if you please, its significance is not of value during the violent throes of an attack of pain, during the presence of fever, or of any abdominal disorder disturbing the balance of the circulation.

It is of interest to recall that the hemorrhage was unattended by any urinary salts in 11 cases of renal calculus, showing that other possible factors for its production can be eliminated. I will not dwell upon the necessity of eliminating all sources of urethral, vesical, and ureteral hemorrhage before coming to a conclusion that the hemorrhage is of renal origin. Cystoscopy must be resorted to, of course, and possibly in the right hands, ureteral catheterization. If the hemorrhage is free the time of its passage in the act of urination must be determined. Likewise the reaction of the urine must be borne in mind. It is true catheterization alone can avail to pronounce from which kidney the hemorrhage comes.

A word as to blood-cylinders. They are rare, if present at all, in renal calculus. I have not observed them. They denote hemorrhage from the renal substance. Their presence would indicate that the blood is truly renal, not pelvic.

It is thus seen that blood in the urine may arise from various sources. In a person of middle life, with uric or oxalic acid tendencies, by virtue of heredity, occupation and habits, in whom no cause for the hemorrhage can exist in the urethra, bladder or ureter, the chances are that it is of pelvic origin, due to the irritation of gravel or of urine densely loaded with salts.

Klemperer has recently called attention to hematuria from healthy kidneys, as the result of over-exertion, in one case from horseback-riding, in another from the bicycle. Such causes must be borne in mind. He also reports 4 cases of hemophilia and a group due to an angioneurosis. Note now for future reference that hyaline casts were not present; indeed he specifically mentions they were absent, although blood-cylindroids were present. These forms of hematuria are not attended with enlargement of the kidneys. They do, however, present sensitiveness on percussion. He notes the presence of rouleaux of red blood-corpuscles or bloody cylinders but no casts; general symptoms of neurasthenia support the diagnosis.

PYURIA.—Pus in the urine is looked upon by all authorities as almost essential to the diagnosis of renal calculus. Unless a few leukocytes, which may come from various sources, all of which possibilities are to be excluded—unless these leukocytes warrant us in stating that pus is present—this product of inflammation is usually absent. Of the 28 cases which I examined, in 15 there was no pus; in 6 a few cells or a very small quantity was found (4, womb, cause obvious); in one it was noted as considerable (old gonorrhea and syphilis, 4 examinations); in 1 a

small quantity (male, cause assignable); in 1 it was small in amount, twice only in some 50 examinations; in 1 it was abundant and due to genito-urinary infection as well as pyelitis. It is, of course, necessary to make repeated examinations of the urine, and it is of interest to note that in the cases in which we had this opportunity, pus was not found, although the diagnosis of renal calculus was established by passage of the stone or by operation. I am of the belief that pyuria is not present unless an accidental infection has taken place from the lower tract. I do not think we are warranted in terming pyuria a symptom of renal calculus. It may become an accidental complication from infection either before the stone has obstructed the ureter, or from infection extending from below upwards.

ALBUMIN.—In 21 patients albumin was found. It was in large excess in 3 due to co-existing Bright's disease. As a trace it is of frequent occurrence and does not imply a co-existing nephritis. I refer, of course, to serum-albumin and not globulin. The patients in whom it was found have been under my observation a long period of time and have not presented any further signs of nephritis. Its presence, as well as the co-existence of casts, need not deter one from surgical interference in a case of uncomplicated renal calculus. Nor should large amounts deter one, if pyelitis is present.

In judging of the functional activity of the kidney it is necessary, when practicable, to estimate the urea-output. When this is satisfactory, no hesitancy is justifiable, when operative resources are indicated. This was estimated in the case of one patient, and although casts and albumin were present over a long period the kidneys were normal, and she bore the operation, performed by Dr. Wharton most skilfully, very well.

CASTS.—Casts are present in the urine in nearly all cases of renal calculus. Sedimentation must be used. They are hyaline—not abundant—long and narrow. Their persistence without other signs, with or without albumin, is diagnostic of renal irritation, and with other signs points quite unfailingly to calculus. As intimated, they need not give concern as to the condition of the renal tissues unless other indication of Bright's disease are present. With albumin, they should be studied in relation to the specific gravity. If that is high and remains normal or above normal, as is usually the case, we need have less apprehension. Casts of the character above indicated were mentioned in 10 of the cases I have observed.

THE SPECIFIC GRAVITY of the urine is a cogent adjuvant in the diagnosis. Its persistence above the normal is both a comfort and a sign. It enables one to exclude renal cirrhosis, aids to eliminate hysteria or a renal neurosis—if I may use the term.

FREQUENT MICTURITION is not in my experience an indication of stone in the kidney, save when attempts are made for its passage.

PAROXYSMAL RENAL FEVER, allied to hepatic fever in its expression, rarely occurs, but when present may be due to calculus. It was present in one case only which I saw in consultation. It may be due to absorption of retained products, if the kidney is floating and becomes twisted. It may be due to pyelitis. But it is not our object to discuss the symp-

toms of rare occurrence attendant upon renal calculus, but rather to weigh the plain every-day evidence that is brought before us.

DURATION OF SYMPTOMS AND FAMILY HISTORY are valuable data upon which we must go, but need not be referred to further.

It will be seen that some statements from our very limited experience —although it covers 20 years of fairly active life—are not in accord with the various text-books. Indeed it is interesting to read the various articles, and to note their constant similarity. They read as if one article had been written from the previous article. I fear I must plead guilty myself to this accusation. We all, for instance, make the statement that renal calculus occurs in the very young and the very old; that it is most common in women; that pain, intermittent hematuria, pyuria, and the passage of a calculus are the diagnostic features. Are we not warranted in the statement that middle life is a predisposing factor, and that persistent hematuria is symptomatic, but pyuria rarely so, while albuminuria and hyaline casts in urine of high specific gravity are prominent elements of the symptom-complex upon which a diagnosis is made.

It would be of great interest to see where the literary fault was first committed. Stone was originally written about from the standpoint of the bladder, and by those who had experience with stone in countries where it prevailed on account of the water. No doubt the statements of the early writers have been handed down from writer to writer without cavil. Furthermore, my contention of the relation of age seems to be sustained by the court of final decision—the surgeon who operates for their removal when the diagnosis is absolute. Such operations are infrequent in the young. Moreover, writers on diseases of children do not speak of their occurrence as common to that age, and, indeed, Ashby and Wright inveigh against it.

THE DIAGNOSIS.—Were I asked what do I consider most essential in the diagnosis of renal calculus I should say patience and care. We are too apt to be hasty. Indeed, I hold a positive diagnosis cannot be made unless the patient is under observation for some time. Let me then plead for delay and patient study of the every-day phenomena with the every-day means at our command. The element of time is essential, first to establish the data upon which we make a diagnosis; and, second, to observe the course of the disease. Of course, the occurrence of an accident, as obstruction, demands prompt action. Is it not possible that healthy kidneys are operated on too often because the case was not carefully studied over a long period of time; or for the same reason the kidney of the wrong side cut down upon?

If such care is taken I believe the diagnosis can be established by the symptom-complex of *pain*, local tenderness, persistent *hematuria*, *albuminuria* and *casts* (the cardiac, vascular and renal origin of which is excluded), by the phenomena of *renal colic* and by *passage* of *fragments* of stone. Hematuria may have one more word. If the patient is put at absolute rest—no extraneous cause as heart-disease, blood-dyscrasia, etc., being present to cause hematuria—and the hemorrhage persists, it is more likely of a cancerous or tuberculous origin.

I will desist from the temptation to tabulate and discuss the differen-

tial diagnosis of renal calculus from appendicitis, movable, and twisted kidney, biliary colic, and the other stimulated affections; nor will I enter into a discussion of the virtue of catheterization and exploration by the ureter. I have had no experience with it and am not able to decry or extol. I must confess I am more in sympathy with Hollander than with Casper in the tenets he upholds. These doughty opponents have been stating their views in the recent numbers of the *Berliner klinische Wochenschrift*. I feel with Hollander, we can in a large number of cases make a diagnosis without the aid of catheterization, and I appreciate with him the danger of infection from below—of which he cites cases. It is worthy to remark that the only cases of pyelitis in my own private practice were from this source. If we had a Kelly or a Mann or a Casper at our command to perform the catheterization it would be well enough. To trust such means to the general practitioner I fear would be a repetition of our disasters from uterine specula and uterine sounds.

I had thought to say a word about treatment. I find I can say nothing new. I have been well satisfied with the use of rain-water, gathered in a proper manner. Beyond this, diet, exercise and other hygienic lines must be followed. But rarely are operative measures required. I am in accord with the indications laid down in the works on surgery: Pain that disables; obstruction; pyelitis. I unhesitatingly am against all operative measures unless a diagnosis is fully established, which can be done, I believe, if we take time, and view broadly.

---

## INTESTINAL PERFORATIONS IN TYPHOID FEVER.

Monod gave an account of a case, which he had been called upon to treat three weeks previously, in which there was intestinal perforation. He performed a median laparotomy, which gave issue to a quantity of purulent serum and to a loop of thin intestine which was perforated. The latter was sutured, and after lavage and drainage of the stomach it was closed. Improvement seemed apparent during thirty-six hours, but the patient died. The autopsy revealed the fact that the suture had remained intact. In 1884 Leyden conceived the idea of surgical intervention during typhoid fever, and in 1890 Louis reported 11 cases with 11 deaths. Monod stated that his researches had attained a total of 35 cases among which were five recoveries, but that if carefully examined it would be found that these five cases are far from being perfectly authentic, particularly those of Drs. Murphy, Hill, and Wagner. Only two appear to be undoubted—one in 1891 and one in 1895.

It may be stated that the intestinal suture remains intact, even in these fatal cases, but the patient is already in a state of semi-collapse, and should be very carefully examined before it is decided to have him run the risk of a laparotomy. The perforation occurs in the centre of the peritoneum, and generally infects the latter. The perforations are often multiple, and even upon intervention it is not possible to find them all. A patient presenting intestinal perforation during typhoid fever dies, or is

likely to die. If there were only a single chance of recovery (and there are two) it is imperative to give the patient the benefit of this chance, particularly if the conditions are at all favorable.

Routier stated that, guided solely by the painful spot in a typhoid patient, he performed a laparotomy which disclosed two perforations which he was able to suture; he left the stomach open, but the patient, nevertheless, succumbed upon the tenth day to two new perforations. There is a difference between the perforations occurring at the beginning of typhoid fever and those presenting themselves during convalescence. The two cases of recovery were reported of the latter class.

## THE USE OF THE CATHETER IN CASES OF PROSTATIC DISEASE.

Bangs (*Med. News*, February 12th, 1898) in a paper on catheter life, with some remarks on the etiology of hypertrophy of the prostate gland, lays down some general directions on catheterism which should, it is held, be rigidly followed by the patient. The soft catheter with solid tip is the best to use if possible. If a rigid one be required, one made of elastic webbing, with a curve or bend at the point, is preferable. A new catheter must be treated with the same care as to cleanliness and asepsis as one that has been in use. If possible, it should be exposed to the vapor of formaldehyde; if not, it should be immersed in a solution of formalin (1 to 2 per cent.) during at least fifteen minutes. Then it should be placed in a strip of bichloride gauze, or placed between the folds of a perfectly clean towel. Each catheter should be kept in a separate receptacle or closed drawer, where dust cannot find access to it, and where it cannot be handled except by the person who is to use it. If the patient must carry the instrument about with him, it should be kept wrapped in several layers of bichloride gauze, and outside this should be placed a wrapping of "waxed" or parchment paper, held firmly by rubber bands. Just before using the catheter the patient must thoroughly clean his hands, and rinse his fingers in pure alcohol. In the meantime the catheter should be lying in formalin solution. Then, after shaking it, and wiping off any drops that may remain upon it with a piece of clean gauze, and smearing it with a proper lubricant, the patient should gently pass it along the urethra. Immediately after use the catheter should be thoroughly washed with soap and water, be steeped for a time in the solution of formalin, and then carefully put away in gauze or clean towel in readiness for the next use.

## A NEW METHOD OF DRAINING THE PERITONEAL CAVITY.

Delagénière (*Bull. et Mèm. de la Soc. de Chir.*, No. 12, 1898), holding that the means hitherto used for draining the abdomen after laparotomy are defective, proposes to drain this cavity in a similar way as a spirit lamp is drained by its wick. He employs a perforated nickel tube, in which is inserted a skein of absorbent cotton. This skein closely fits the

interior of the metallic tube, and is frayed out as it projects from either end. Both the outer tube and the cotton can be readily sterilized, and the skein can be changed from time to time without removing the tube. In no case, the author states, should the metal tube be allowed to remain for a longer period than thirty-six hours. Excellent results, it is stated, have been obtained from this method of drainage, and after long and difficult abdominal operations the course of the after-treatment has thus rendered absolutely apyretic. The nickel tubes used by the author vary in length from 8 to 10 cm., and in diameter from 15 to 20 mm.

---

## EXTENSIVE INJURY OF THE LIVER SUCCESSFULLY TREATED BY OPERATION.

Snyers (*Ann. de la Soc. Belge. de Chir.*, April, 1898) reports a case of penetrating gunshot wound on the right side of the chest, with laceration of the liver. The injury had been caused by a gun loaded with small shot. At the sternal extremity of the seventh rib was a small circular wound, which was plugged by a protruded piece of omentum. On opening up this wound, and exposing freely the abdominal cavity, the author found that the free anterior margin of the liver formed a large loose flap, which was attached to the rest of the organ merely along a portion of its upper surface. This flap was about four inches in length, and two finger-breadths in thickness. Between it and the lacerated liver structure on the under surface of the organ were found loose fragments of the seventh and eighth ribs. These fragments having been removed, several ligatures were applied along the attachment of the hepatic flap to the rest of the liver, and the flap itself was then cut away. The wound was plugged and drained by antiseptic gauze. The patient, a lad, aged 16, was much collapsed at the end of the operation, which was performed within an hour from the time of injury, but finally made a complete recovery.

---

## SURGICAL ITEMS.

It is not essential for the management of a surgical case that the patient be placed in a hospital, but cleanliness in private quarters, with proper nursing, may secure entirely satisfactory results, by conforming to the ordinary surroundings of the patient.—*Gaston.*

---

A thorough comprehension of the reciprocal relations of immunity and susceptibility should lead to the adoption of conservative measures in the practice of general surgery, and the use of the most radical and aggressive measures when indicated by the nature of the case.—*Gaston.*

---

In the ordinary cases of prostatic enlargement of however long standing, in which the obstruction is not great and the power of the bladder is fair, in which there is not an excessive amount of residual urine, in which catheterism is easy and painless, and in which cystitis, if it exists, is not severe and can be controlled by aseptic washings and regular catheterism, operative treatment is not indicated.—*Alexander.*

# MEDICINE.

IN CHARGE OF
N. A. POWELL, M.D.,
Professor of Medical Jurisprudence and Lecturer on Clinical Surgery, Trinity Medical College; Surgeon to the Hospital for Sick Children, and to the Extern Department Toronto General Hospital; Professor of Surgery, Ontario Medical College for Women. 167 College St.; and
WILLIAM BRITTON, M.D., 17 Isabella Street.

## HEART DISEASE FROM THE STANDPOINT OF LIFE INSURANCE*

BY ROBERT H. BABCOCK, A.M., M.D.

When your president did me the honor of inviting me to address you this evening, and suggested that I speak upon this subject, it seemed to me that I had a great deal to say. Upon reflection, however, I became at a loss to decide just what to say that could be of practical interest to life insurance examiners, because the attitude of the companies with relation to heart disease is fixed. But as I was assured that the majority of my hearers would be examiners-in-chief, and the position of life insurance associations seems to me wrong, I decided to criticize their attitude in the hope of beginning a movement to induce more of the companies to modify their decision regarding applicants whose hearts do not come up to standard.

So far as I have been able to learn, only four companies—the New York Life, the Security Life and Trust of Philadelphia, the Life Insurance Clearing House of St. Paul, and an assessment company of Hartford—have thus far departed from the rule, and now issue what are known as "substandard risks." For the most part, as you well know, insurance companies refuse applicants whose pulses or hearts deviate from the normal as follows: A pulse-rate persistently above 90 or below 60—some say above 85 and below 50—and habitual arrhythmia; a murmur, whether anemic or of organic origin, provided it be permanent, absolutely rejects the applicant. I do not ask that such risks be accepted as standard risks; but I believe it is unjust to exclude them altogether, and would have all companies establish under-average ratings.

Before I state why and wherein I believe the attitude of most companies at present towards heart disease is wrong, let me discuss some of the reasons that influence them. Doubtless it is one of cold dollars and cents, or rather experience has taught them that it is safer to reject all applicants with defective hearts than to accept the recommendation by their examiners of some of these risks.

The attitude of insurance companies toward their examiners is one of distrust of their ability to make reliable reports on the condition of heart patients and to judge of the likelihood of such persons to live out their

*An address delivered before the Chicago Society of Life Insurance Examiners, Jan. 24, '98.

expectancy. Therefore, the rank and file of medical examiners are mere machines who turn in reports, while all discrimination and decision is left to the examiners-in-chief or the medical directors. I will go further, and say that in some instances the attitude of the companies is one of discredit of the value of medical examinations. This was impressed upon me by a conversation some years ago with the general manager of one of the two largest insurance companies in the East. He said he attached so little importance to a medical examination that if his chief examiner in this city were to forget his medical knowledge the next day he would still retain him in his position, because of his knowledge of men and conditions in Chicago. This general manager added that he did not pretend to any medical knowledge himself, yet he felt so sure of his ability to judge of risks simply upon inspection that if a hundred men were to walk slowly through that office he would tell who were good and who were bad risks. To this I responded that I could bring in twenty men, every one of whom he would accept on this basis, and yet every one would have heart disease.

What are the reasons for this distrust on the part of the insurance companies? It has been suggested to me that this is due chiefly to the impossibility of securing examiners whose work can be relied upon. Now if this be the case, then I believe the companies are themselves largely to blame, first because of the methods of appointing examiners. This is done in one of the two following ways: A young physician with more time than practice applies for appointment, and sends in the names of professional friends as references. Confidential letters are sent to these or other physicians supposed to have knowledge of the applicant's ability and character, with the request that they state in confidence what their knowledge and opinion of said applicant's qualifications are. Now, it is a well-known fact that nothing is easier than for one doctor to get a recommendation from another doctor. Consequently in this instance the recipient of the confidential letter, although he may have no personal knowledge of the young man's ability, gives the desired recommendation on the assumption that having been graduated at a reputable medical school he must have been adequately trained; and on the strength of such endorsements the appointment is made.

Another method is for an agent to send to the company the name of some physician well known in the community, or who has been recommended to him by some layman. The chief examiner is then despatched to the locality, and ascertains what he can of the doctor's character and qualifications by inquiry or personal interview. If these investigations are satisfactory the physician is appointed.

Now I claim this method is defective, and that examiners should be appointed only after an examination into their knowledge of physical diagnosis, conducted by the chief examiner or some one qualified and duly authorized by the company. It may be urged that this is not practicable, and perhaps it is not; but at all events some other than the present method should be devised.

Secondly, I incline to the opinion that insurance companies would secure better examiners if they paid better fees. To this it has been ob-

jected that as a matter of fact they get better work now at three dollars than they used to at five, because it is done by active, hustling young doctors eager to distinguish themselves and to get work. This may be so, but if insurance companies would have examinations of the heart upon which they could depend, they should pay fees sufficient to command the services of authorities in our great medical centres. By this means, errors would be less frequently made in the acceptance of unfavorable risks.

On the part of the rank and file of examiners there is reason for distrust of their reports, because of their incompetency or their carelessness. There is often a temptation to do careless work when the examiner knows that the agent with an eye on his commissions is likely to throw the most of his patronage in the way of the examiner who rejects the fewest risks. You are all familiar with such instances. Some ten years ago an examiner who was inclined to refuse the application of a certain man because of a cardiac murmur sent him to me for my opinion. I agreed with the examiner, and reported unfavorably on the risk; whereupon the agent took the applicant to a second examiner, who listened to the heart through the shirt, failed to detect the murmur, and passed the risk. With competent and careful examiners such things could not occur.

Now let me pass on to the reasons why the attitude of insurance companies is unjust toward applicants whose hearts or pulses are not up to the standard. In the first place, we all know individuals who, although their hearts are defective, are nevertheless better risks than some who are already insured. It is no reason *per se*, because a young man has a compensated mitral regurgitation and is otherwise in good condition that he should not live out his expectancy. Indeed, I can recall a case of a woman who had a mitral insufficiency for nearly or quite fifty years, and another female who, with pulmonary regurgitation at the age of 58, gave a clear history of the disease having lasted since her 8th year.

Even in so serious an affection as aortic incompetence a comparatively long life is not impossible. I knew a man who when he died of this disease at 46 had certainly had it for thirty-one and perhaps thirty-four years. Of course I would not recommend even as substandard risks individuals with such grave lesions as this; nor would I limit my recommendation to cases of compensated mitral regurgitation. There is no valvular disease in which the prognosis is so good as pure and uncomplicated aortic stenosis of inflammatory origin in a young man. It is far otherwise with this relatively rare form of valvular disease when it occurs in persons of middle age or beyond. In such it may be of sclerotic origin, and the prognosis is bad. Therefore, other things being equal, I should have no hesitation in recommending for insurance on an under-average rating a young man with a moderate, thoroughly compensated aortic stenosis.

Let us now consider the instructions to examiners concerning the pulse. Tachycardia of ninety or even one hundred is often due to the perturbation of an examination, and in such a case often subsides before the examination is over, or upon a subsequent sitting. But this is not

always so, for some excitable people will have a rapid pulse every time they visit the doctor. Moreover, as stated by authors, a pulse of a hundred is natural to some individuals, and is by no means an indication of heart disease. Of course, a pulse-rate habitually much in excess of a hundred is suspicious, to say the least.

Bradycardia, or a pulse below fifty, is likewise no evidence of cardiac disease, since it may be natural to some people, as was the case with Napoleon Bonaparte. He could not have been insured because his pulse-rate was habitually forty, and yet his death was due to causes not connected with the heart. As tachycardia may be due to some poison like tea, coffee, or tobacco, so an abnormally slow pulse may be caused by some toxemia, and not necessarily by organic disease either of medulla or heart.

Even more truly may it be said of arrhythmia that it is not *per se* an indication of cardiac disease. I recall the case of a friend, a young man of about thirty-five, in whom at one time about ten years ago I found the pulse so irregular and intermittent as to be truly alarming. When I told him so he only laughed and said he knew it was due to coffee and tobacco, and that if he would only give up these his pulse would become perfectly regular. In fact, such proved to be the case later on, and he is still living in this city, an active business man, with, I have every reason to believe, a healthy heart. For these and other reasons it is wrong to reject a risk on the pulse alone without taking into consideration the physical findings of the heart.

Likewise, a cardiac murmur should not have undue weight attached to it, for as is well known it is the least important, although the most easily recognized, sign of heart disease. It is possible for a patient to have a mitral systolic murmur for years without any symptoms or secondary physical signs of heart disease, the murmur being accidentally stumbled upon during an examination for life insurance. Moreover, the intensity of a murmur is no criterion of its gravity, since a trifling lesion may be attended by a loud bruit, and, on the other hand, a dangerous one be declared by no murmur at all. More than one instance has been recorded in the last few years of regurgitation through the aortic valves, shown by every other physical sign and found post-mortem, yet in which no murmur was heard during life. Therefore murmurs should be estimated in connection with the presence or absence of other physical signs of heart disease.

There is a type of individuals whom I desire to comment on as illustrating the importance of an accurate determination of the relative and not alone the absolute cardiac dulness. These are robust-looking men of large frame and ample chests, who are apt to be accepted as first-class risks. For the most part they are hearty feeders who habitually take an excess of food both in quantity and quality, eating meat three times a day, who take comparatively little outdoor exercise, and who are of active mentality or have great responsibility. If the heart of such a man be examined, absolute dulness is usually normal, whereas deep percussion will reveal an increase of relative dulness sufficient to constitute cardiac enlargement. The left nipple is usually taken as the normal boundary

of the heart's dulness on the left; yet if in such a broad-chested individual the mammary line be from four to five inches to the left of the mid-sternum and the heart reached to this point, there is already an unduly large heart, or what Frentzel has called Enlargement of the Heart without Valvular Disease.

Owing to his sedentary habits and hearty feeding such an individual develops persistently high arterial tension,and this leads finally to hypertrophy and dilatation of the heart. These are the risks which so often die unexpectedly in the fifties or early sixties of what is called "heart failure." I have seen two or three such cases within the past week. One of them, a man of 43, manager of a large manufacturing interest, consulted me because, after an attack said to be la grippe, his family physician told him his heart was weak. He gave no symptoms of cardiac dyspnea or palpitations, but his habits as to exercise, diet, etc., were defective. His pulse was slightly accelerated, about 84, of fair volume, but rather too compressible. His chest was broad and capacious. Absolute cardiac dulness was normal, whereas the area of relative dulness measured transversely about seven inches. Excepting slight weakness of the first sound at apex and moderate accentuation of the pulmonic second, the heart sounds were negative. Here, then, was a healthy-looking man who would probably have been accepted by any medical examiner as a standard risk, and yet he had a degree of cardiac enlargement that in my opinion renders him an under-average risk.

Let me give another instance: A robust-looking man, the picture of health, about 46, was brought to me by an agent who stated that he had been passed by several examiners, only one having refused him because of a slight murmur at the apex. Absolute cardiac dulness was normal, but deep percussion showed considerable increase in the area of relative dulness. The first sound was not quite pure, but there was no murmur; aortic second sound was ringing. I do not know that I should have rejected the applicant on the heart findings even then, but when I laid him on the couch and palpated the liver I found to my surprise that its lower border reached nearly to the level of the umbilicus and was rather hard and thin. His habits as to the taking of liquor (three or four drinks a day) would be likely to induce atrophic cirrhosis rather than enlargement, and as he gave a history of inflammatory rheumatism some years before I was inclined to suspect pericardial adhesions as the cause of the cardiac and hepatic enlargement, although there were no positive signs of an adherent pericardium. Of course I promptly rejected the risk, and the man left my office very hot, saying no one had ever called his liver in question, and he thought my opinion ought to be limited to his heart. I told him that was all right, but that my opinion of his heart was largely influenced by the result of the examination of the liver. This case exemplifies the importance of determining relative heart dulness. These considerations warrant the belief that it is an injustice as well as bad business policy to accept such risks and turn down individuals who happen to have a well compensated mitral insufficiency or aortic stenosis.

Finally, let me dwell on some of the conditions which should determine one's opinion of the likelihood of an applicant with such a compensated

valvular lesion to live out his expectancy. If there be a tendency to recurring attacks of articular rheumatism, or if he have gonorrhea or some other infectious disease liable to set up fresh endocarditis, the prognosis is unfavorable. Age also influences the prognosis. Valvular disease in children is very grave even though it be compensated; likewise at or beyond middle age, because then it is probably of sclerotic origin and progressive, whereas in healthy young adults compensation may be preserved for years. The occupation is of utmost importance, since, if it subject the individual to vicissitudes of weather or to cardiac strain from carrying burdens and lifting heavy weights, as is the case with porters, or if it necessitates irregular meal hours, loss of sleep, excitement, running, etc., as in the life of the trainman, compensation is not likely to be long maintained. On the other hand, if the work be light, meals regular, diet nutritious, and the patient of a calm, equable temperament, a rather more serious lesion may yet furnish a better prognosis than in another case of less pronounced disease but less favorable environment.

The habits, too, should not be left out of account, for if of importance in men without heart disease, they are of infinitely greater weight in making for or against the maintenance of compensation in valvular disease.

It is needless to enlarge further upon this topic to examiners who are already familiar with the value of such things. I have only taken up so much of your time and attention for the purpose of emphasizing those points which seem to me satisfactory reasons why existing rules on the part of insurance companies should be modified so as to provide ratings for persons whose hearts make them under-average risks, but ought not to wholly exclude them from the benefits of life insurance even at high rates.

[The writer gives, perhaps, too favorable a prognosis in aortic lesions; his remarks concerning hypertrophy, apart from valvular disease, are of much value, inasmuch as such a condition is frequently overlooked. We heartily endorse his protest against the employing of inexperienced or incompetent examiners who often secure appointment, not on professional merits, but by means of dexterous wire-pulling.—W. B.]

---

Tincture of Myrrh in Mixed Infections.—As one result of the inability to grapple with mixed infections, the administration of tincture of myrrh internally, which was first suggested in Philadelphia about ten years ago, is being resorted to in Europe, on account of its effect in increasing the number of leucocytes. Stroll, of Munich, reports eighty cases with only one death, treated by this method. He prescribes:

℞ Tincture of myrrh.....4 parts.
Glycerine.....8 parts.
Distilled water—enough to make.....200 parts.

This is given every hour, or, in severe cases of diphtheria, every half hour; the dose for a child under two years, a coffee-spoonful, and in children up to fifteen years one to two tea-spoonfuls.—*Therapeutic Gazette.*

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF
CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

## NEURASTHENIA ESSENTIALIS AND NEURASTHENIA SYMPTOMATICA.

BY F. X. DERCUM, M.D., PHILADELPHIA.

Clinical Professor of Nervous Diseases, Jefferson Medical College; Neurologist to the Philadelphia Hospital.

At the present day there still exist, not only in the mind of the general practitioner, but even in the minds of specialists, the most vague and ill-defined notions concerning neurasthenia. Not only do we hear from physicians of the highest standing allusions made and views expressed in regard to neurasthenia which disclose that this all-important affection has never received serious attention or study at their hands, but this is true to a very large extent of neurologists and especially of alienists. A striking illustration of this proposition is furnished by the treatise on the pathology and therapy of neurasthenia by Binswanger, which has recently made its appearance in Germany. The writer does not hesitate to say that under neurasthenia we are to group all neuropathic appearances which rest on a basis of a general functional disease of the nervous system, but which cannot be placed in the same category with the fully developed psychoses and neuroses because of their incomplete character. Surely the pages of medical literature have never before proposed as the definition of a well-defined and well-known syndrome such as neurasthenia certainly is, terms more vague or more unsatisfactory. It is largely because neurasthenia to the superficial observer seems uninteresting that it is so little studied, and yet it is an affection so common, the number of cases so large, that we certainly owe it to ourselves to obtain clear, if not elementary, notions of this disease. In truth, neurasthenia is one of the most interesting affections which we can possibly study. As I will presently point out, its syndrome is as definite and fixed as that of any other disease with which we have to deal. Its boundaries instead of being illy-defined are sharply delimited. The various symptom-groups occurring in neurasthenia, though differing widely in detail, always present the same essential features, and, from whatever standpoint they are approached, a harmonious, clinical whole—a well-proportioned and well-defined syndrome—is seen. The work of Binswanger illustrates in reality a backward step. If it is to stand, the writings of Beard, Bouveret, Von Hösling and others to whose labors we owe in a large measure our pres-

ent notions of the disease, fall to the ground, and all the value of the pioneer treatise of Robert Whyte, now over a century and a quarter old, which differentiates this affection clearly from the allied conditions of hysteria and hypochondriasis, not to speak of the writings of Sandras, Bouchut and others, disappears.

Let us analyze briefly the essential features of neurasthenia. In the simplest form of the affection there exists a more or less marked and persistent diminution of nervous energy, and to these symptoms are added those of increased irritability, both mental and physical. To the writer it does not seem that much mystery should attach to this condition, it hardly seems necessary at this day to contend that marked chronic fatigue should present a special syndrome, and yet Binswanger would have us believe that we are dealing with a condition which presents the most vague and indefinite symptomatology. These vague notions of neurasthenia are based, first upon incomplete study, and secondly upon the apparent inability to systematically arrange and properly classify the facts presented. Neurasthenia is still in the position in which hysteria was until recent years in England and America, notwithstanding the fact that the French had demonstrated unmistakeably the symptomatology of the latter affection. Too often neurasthenia is looked upon as a vague affection made up of numerous pathological factors bearing little or no relation to each other. The difficulty partly arises from the fact that the symptoms of neurasthenia are in a large measure subjective, while even such symptoms as are objective lack the striking features observed in many other functional diseases. Another circumstance which has been most prolific of misconception regarding the nature of neurasthenia is the fact that physicians have loosely described as neurasthenia symptoms which properly belong to other diseases. Thus the nervous symptoms associated with anæmia, chlorosis and other diseases of the blood, the nervous symptoms associated with the diseases of the pelvic organs or with chronic disease of the stomach have been loosely termed neurasthenia. If the nervous symptoms associated with general somatic or organic visceral diseases are to be termed neurasthenic, we should be careful to bear in mind that they represent something very different from true neurasthenia. I have myself proposed for this spurious neurasthenia the term neurasthenia symptomatica. If the fact that there exists a true neurasthenia separate and apart from symptomatic neurasthenia is once firmly fixed in our minds, much of the confusion clinging to the subject passes away.

The next fact of importance to recognize is that in true neurasthenia, or, as I prefer to term it, neurasthenia simplex or essentials, in addition to symptoms primarily indicative of the disease, others make their appearance which are secondary in character and importance. Frequently these secondary or subsidiary symptoms are superficially evident or unusually prominent and thus their importance is mistaken and over-rated. Charcot also recognized these differences in the symptoms of neurasthenia, for he separated the symptoms into, first, cardinal symptoms or neurasthenic stigmata, and, secondly, secondary or accessory symptoms. In Charcot's group the fundamental symptoms or stigmata are the fol-

lowing: First, neurasthenic headache; secondly, sleep disturbances; third, rachialgia and spinal hyperaesthesia; fourth, muscular weakness; fifth, the disturbances of digestion (nervous dyspepsia); sixth, sexual disturbances; and seventh, mental symptoms. To these Charcot added the secondary or accessory symptoms, which group consists of all symptoms which are not essential to the diagnosis of neurasthenia. Among them he placed such symptoms as giddiness, disturbances of the special senses, respiratory, circulatory and secretory disturbances, disturbances of general sensation, disturbances of motility and febrile conditions.

Charcot in his classification of the symptoms of neurasthenia merely grouped together as the stigmata or fundamental symptoms the most prominent clinical features of the disease. We will find by analysis that these symptoms are not by any means of equal value. Similarly the secondary symptoms of Charcot, which we have just enumerated, are of very unequal value.

If we grasp the conception of neurasthenia, that it is in reality a *fatigue neurosis*, the symptoms group themselves very readily in a logical and orderly sequence. Primary or fundamental symptoms then stand out boldly and with definite relations to each other. They are always symptoms which present the essential characteristics of weakness and irritability and which are always expressive of fatigue. The secondary symptoms are all such symptoms as are adventitious or mere secondary outgrowths of the primary or fundamental symptoms. I can make my meaning clear by enumerating some of the various primary symptoms and contrasting them with some of the secondary symptoms. Beginning with the sensory disturbances, we have, first, a general sense of fatigue or tire. This sensation may be diffused throughout the entire body, but it is generally accentuated in special regions or limbs. It is characteristic of this sense of fatigue, whether it be referred to the head, to the back or to the limbs, that it is, in the simple and typical cases at least, always relieved or lessened by rest, and, further, it is always brought on, if absent, or made worse, if present, by exertion. This readiness of fatigue, this general sense of tire, I regard as the primary symptoms, if indeed not the most fundamental of all the symptoms, of neurasthenia. Fatigue sensations when they become exaggerated become painful, and they are then described by the patient as aches of various kinds. It frequently is a headache, almost as frequently a backache, or the ache may be referred to a leg or to an arm. In the latter instance a few questions with reference to the avocation will almost always reveal the reason for the accentuation of the pain in one extremity. Thus, in a collector, the fatigue sensations were most pronounced in the legs, in a physician who used his right hand constantly and for many hours daily in laryngeal manipulations, the fatigue sensation was accentuated in the right arm.

These fatigue sensations, these aches of various kinds, let it be repeated again, are primary symptoms. Not infrequently, however, we have associated with these symptoms others which are secondary and which I have in some of my writings termed adventitious. Thus the headache of neurasthenia may be accompanied by a sense of pressure or constriction or by a sense of fullness, lightness or distention. These

sensations depending as they probably do upon disturbances of the circulation are secondary and adventitious. They are not necessary parts of the neurasthenic headache and may or may not be present. Sometimes other sensations are noted, such as throbbing, sense of increased weight, whirling sensations, or vague and ill-defined feelings of distress; all of these are secondary in value.

As regards backache, the simple feeling of fatigue referred to the lumbar region may be complicated by hyperasthesia, especially over the spinal gutter, where it may be distributed, as is well known, in patches. I refer to so-called spinal hyperasthesia or spinal tenderness. This spinal tenderness I regard as a secondary symptom—as one the indirect outgrowths of a normal fatigue sensation. It is a pathological exaggeration or intensification of the fatigue sensation. The hyperasthesia, the sense of burning and the deep-seated boring pains, sometimes complained of, are clearly adventitious and not primary. The achings referred to the legs or to the arms, present a similar illustration. It is very frequent to find that in addition to or in place of aching in the limbs the patient complains of throbbing or thrilling or tremulous feelings in the limbs. These sensations are likewise to be regarded as secondary. They are not necessarily present and are clearly adventitious. Likewise is it with the various curious paræsthesiæ of which neurasthenics every now and then complain, such as pins and needle feelings, numbness, prickling or of velvety sensations, all of which belong to the group of secondary symptoms.

(*To be Continued in Our Next Issue.*)

---

GAVAGE.—John W. Bartol says that the infant, like the adult, often has in its moribund conditions of body and mind a certain distaste for nourishment of any kind, but, unlike the adult, is not able to call to its aid the power of will so often essential for the obedient execution of the physician's directions. It is obviously our duty to feed these patients against the will. In another class of cases there is a certain type of obstinate vomiting, the children taking food readily enough, but being unable to retain it even in small quantities. It will often be found in these cases that the reflex vomiting is less liable to be excited by the passage of the tube than by the food itself taken in the natural way; in some of these instances, in which there is a prospect of steadily advancing failure, the trouble may be tided over until a slight gain in tone enables the patients to resume their normal habit.—*American Journal of Obstetrics.*

---

URTICARIA.—

℞ Chloralis .....
Camphoræ ..... ää ℥i
Pulv. amyli ..... ℥i-ii

M. Sig: Keep tightly corked in a wide-mouthed bottle. Rub in with the hand.—*Bulkley.*

# NOSE AND THROAT.

IN CHARGE OF
J. MURRAY McFARLANE, M.D.,
Laryngologist to St. Michael's Hospital. 32 Carlton Street.
D. J. GIBB WISHART, B.A., M.D.C.M., L.R.C.P.L.
Professor of Laryngology, etc., Ontario Medical College for Women; Lecturer in Laryngology and Rhinology, Trinity Medical College; Rhinologist and Laryngologist Hospital for Sick Children, St. Michael's Hospital, and the Girl's Home; Toronto General Hospital. 47 Grosvenor Street.

## LUPUS AND X RAYS.

The author showed two cases of lupus successfully treated by Rœntgen rays. In the first case, the skin over the nose was affected, and had been unsuccessfully treated by other means. The other case was lupus of the cheek, and of the nasal mucous membrane. The former was cured; the latter was hardly favorably influenced.—ALBERS-SCHONBERG, *Munch. Med. Woch*, Feb. 15, 1898.

## ANTRUM OF HIGHMORE.

The author demonstrated twenty-five preparations of the pathology of the antrum of Highmore from his collection. He considers important the thickness of bone between the teeth and the antrum in the etiology of disease of the antrum. The striking frequency of pus in post-mortem examination of the antrum he considers due to disturbance of nutrition in fatal diseases, and should be imputed to weakened constitution. One preparation showed marked decrease in size of the antrum, and a striking asymmetry of the facial bones in consequence of empyema. Spontaneous healing of chronic empyema is proved by the filling up of the antrum with connective tissue; further, by a large perforation through the anterior wall artificially, healing is brought about in an analogous way. Polypi in the antrum are found oftener when the contents are mucous, and not purulent. Mucous cysts are found in thirty per cent.—BERGEAT, *Munch. Med. Woch.*, Feb. 22, 1898.

## CHRONIC CATARRH OF THE SUPERIOR AIR PASSAGES.

Besides all the other reasons of chronic catarrh, one principal one is supposed to be the too dry air in the rooms during the winter time. The rest is not of special interest.—KOPPEL, *Petersburg Med. Woch.*, No. 41, 1897.

## SERUMTHERAPHY IN OZÆNA.

The author pays particular attention to the accidents which occur in this form of treatment, and concludes that any drawbacks of a serious character may be avoided by using small doses.

He sums up the results of treatment as follows:

1. Complete disappearance or attenuation of fœtor always occurs.
2. Crusts persist, though somewhat diminished in quantity.

3. It is impossible at present to say that good results are lasting. Though of short duration, they are often better than those obtained by douches and cauterization. Children react better than adults.

4. Hyperæmia and swelling certainly occur.

5. He has never observed complete disappearance of Belfanti's bacillus, or Lœwenberg's coccobacillus, even during treatment.

6. This treatment if the most convenient method for combating the fœtor, but hopes of a definite cure should not be held out to the patient. In the majority of cases the result will be but temporary.

These conclusions are drawn from observation of Gouguenheim's cases at the Lariboisière Hospital.—LOMBARD, *Ann. des Mal. de l'Oreille.*

### HAY FEVER.

The author reports a few cases of hay fever with gastric symptoms. So he prescribed Karlsbad waters, and at the same time treated the nasal mucous membrane. The author believes he had good results by this method.—MULLER, M. (KARLSBAD) *Wien. Med. Club,* Oct. 20, 1897.

### FOREIGN BODY IN THE NOSE.

A girl, four years old, had been treated with cod-liver oil for a supposed scrofulous disease of the nose. There was profuse fœtid, purulent discharge from the left nostril; there was also deafness. Examination revealed a mass, covered with secretion, in the middle meatus, which, on removal, proved to be a small piece of hard sponge. The nose was irrigated with saline solution and recovery ensued.—SEMONSOHN, MAX, *Deutsche Med. Woch.*, Feb. 2, 1898.

### ON THE CONNECTION BETWEEN NASAL AND OCULAR DISEASES.

The connections between nasal and ocular diseases are essentially of three kinds. The first consists of reflex ocular disturbances, lachrymation, photophobia, scotoma, ophthalmic migraine, and especially asthenopia. Even though the direct proof of the connection of subjective ocular disturbances is not easily established from objectively proved nasal disease, yet the practical experience of a connection cannot be disputed. The second consists of an internal connection between the nose and eye, through the direct communication of the conjunctival sac with the nose by means of the tear duct. The lachrymal duct opens in the inferior meatus, and consists of a membranous covering from the mucosa, of submucous and cavernous tissue like that covering the turbinate. Inflammation in the nose, hypertrophy of the inferior turbinate, ulcerative processes, cause swelling of the cavernous tissue of the lachrymal duct with stenosis, and, as a result, stagnation of tears in the tear duct. Bacteria increase and cause inflammation of the tear duct walls, producing dacryostenosis and dacryocystitis. As a result, preliminary treatment of the nose should precede probing and washing out of the tear duct. The third consists in the respective connection between nose and eye. The contents of the orbit which are surrounded by the accessory sinuses of the nose, so that inflammation of these, owing to their thin walls, can easily spread

to the eye. Every gradation, from simple collateral hyperæmia to orbital abscess and cellulitis has been observed. It has been proved that orbital abscess is usually secondary to disease of the antra.

There is displacement of the eyeball in the opposite direction from the situation of the abscess, disturbance of movement and pain. The reverse may occur; inflammation from the eye may spread to the nose. This is rare.

Discussion followed. Hirschmann stated that Nieden, Ziem and Bresgen were the first to point out the connection between nasal and ocular diseases. Reflex affections are very common; asthenopia diminishes after removal of adenoids. He describes a case of bitemporal hemianopsia, which was due to disease of the sphenoid. It was probably due to an exostosis which pressed on the chiasma of the decussated bundles of the optic nerve, for the patient showed exostoses on the vertex. Death was due to disease of the lungs, but no post-mortem could be obtained.

Hopmann stated that many cases of disease of the naso-lachrymal canal, as well as phlyctenular conjunctivitis, were treated unsuccessfully by oculists, because the nose was neglected. In a case of Basedow's disease the symptoms became less after the removal of a nasal polypus and treatment of atrophic rhinitis.

Hirschmann pointed out the importance of the vascular connections between the nose and the eye. Branches of the ophthalmic artery and ethmoidal arteries (ante and post) go to the nose, and the nasal veins communicate with the ophthalmic veins. The principal reflex disturbances are changes in the field of vision, disturbances of accommodation, fleeting scotoma; the nasal causes are hypertrophy of the inferior turbinates and adenoids.

Lieven reported a case of synechia of the inferior turbinate, where there was ciliary paresis and frequent pain in the eyeball; violent coughing was produced on pressure. After removal the symptoms disappeared.—STIEL, *Munchener Med. Woch.*, Jan. 25, 1898.

### ON SUDDEN DEATH IN CHILDREN, ESPECIALLY INFANTS.

In 1879 Baginsky described a case with post-mortem appearances where sudden death was due to pressure on the trachea by an enlarged thymus. Grawitz has described two cases—one six months, the other eight months old—where, in otherwise healthy children, death occurred suddenly, due to pressure of an enlarged thymus on the trachea.

Berthold has seen four similar cases. He refers to the different causes of enlargement of the thymus, but emphasizes a simple, genuine hypertrophy, which runs a latent course, unlike the other forms, and occurs in strong and healthy children. In these, sudden acute asphyxia occurs, face becomes a deep bluish-red color, the hands are spasmodically closed, child dies without a cry. He quotes two cases described by Thomas in Freiburg, and Kopp. In Kopp's case there was enlargement of all the lymph glands (lympho-chorosis of Paltauf). He has collected forty similar cases from the literature.

He describes a case in a girl, two and a half years old, operated on by Rehn, where tracheotomy was performed without benefit owing to great

difficulty in breathing; later, the anterior mediastinum was opened, and the enlarged thymus brought forward and stitched to the fascia on the anterior side of the sternum, allowing the tracheotomy tube to be removed, and recovery ensued. He points out the importance of such cases from a medico-legal point of view.

In conclusion, he points out that an idiopathic hypertrophy of the thymus may alone cause death in infants; that a swollen thymus gland plays an important part in connection with rickets and the status lymphaticus in sudden death in children. That also an acute, perverse, lordotic bending of the neck may compress the trachea and cause asphyxia. He advises operation in the way of partial resection of the thymus when hypertrophy has been diagnosed.—BERTHOLD, *Archiv. fur Kinderheilkunde*, Vol. XXIV., Part III., 1898.

### SURGICAL TREATMENT OF LUPUS OF THE LARYNX.

A boy, ten years old, with a phthisical mother, suffered from lupus of the nose, with hoarseness of two years' duration, which was treated with lactic acid without result. The laryngoscope showed the epiglottis swollen and covered with granulations, and ulceration on the edge with large granulations somewhat obscuring the view of the larynx. Vocal chords were swollen and of a white color. Breathing was difficult and the patient was aphonic. Operative treatment appeared indicated and was carried out by Gouguenheim. A Trendelenberg's tube was introduced. The thyroid cartilage was divided in the middle line; incision from the crycroid cartilage to the hyoid bone. The epiglottis was completely removed, the granulations were curetted, the ulcers scraped with a sharp spoon, and the thermocautery applied. The tube was removed the day after the operation. Healing took place in a short time. Removal of the epiglottis only caused temporary difficulty in swallowing. Voice returned four weeks after the operation. This is the second case of cure after thyrotomy. Surgical treatment of lupus is more hopeful than that of laryngeal phthisis.—GOUGUENHEIM, A., and GUINARD, A., *Ann. des Mal. de l'Oreille, du Larynx*;etc., 1897, Vol. VIII.

### REMOVAL OF A PRESSURE POUCH OF THE ŒSOPHAGUS.

In this interesting communication the author relates the histories of six cases of pressure pouches of the œsophagus which he has seen in his practice. In two of the cases the author removed the pouch with satisfactory results. He believes that the rarity of this condition has been greatly exaggerated. He remarks also that the true pressure pouch is practically always situated at the back of the junction of the pharynx with the œsophagus, and that it opens into the gullet by a longitudinal opening in the middle line, about an inch in length. It is more commonly found in males than in females. All of the author's patients were men, and in every one of them the symptoms of the pouch were first noticed after forty years of age. The one constant symptom in every case is the return of fragments of undigested food many hours after the food has been taken. The fragments may be coughed or choked up, and

occasionally liquids taken at night will run out, and make the patient cough when he changes his position during the night. Pressure on the side of the neck in the posterior triangle causes fragments of food and liquid to return into the mouth. A bougie is arrested at a distance of about nine inches from the teeth. As a rule it passes into the pouch, and its end may be made to project so that it can be felt and seen in the side of the neck (almost always the left side) behind the sterno-mastoid muscle. Wasting and loss of weight are rarely observed until the disease is very far advanced. The course of the disease is very slow. In all cases in which operation has been performed the relief afforded has been complete and permanent. The author refers to various cases which have been operated upon, and to the method of operation.—BUTLIN, H. T., *Brit. Med. Jour.*, Jan. 1, 1898.

---

DIABETES AND URANIUM NITRATE.—Doctor Ebenezer Duncan, of Glasgow, in a paper on this subject, said that ten to fifteen grains had been given by Doctor West in the London Hospital with rather favorable results. Very little has been done in other hospitals. In dogs, cats, rabbits, uranium nitrate produces a nephritis. Doses up to fifteen or twenty grains in the human patient produce no bad results, and may be used for two or three months.

Dr. Tyson said it was twenty years since he had used the drug until last fall, when he tried it again in much larger doses; two grains three times a day being the old dose. This last time he gave five grains thrice daily. In his cases diarrhœa often occurred, and his results had not been good.

Doctor Saundby said that in his experience uranium was not a specific, but it did good in some cases, although he had not given such large doses as fifteen grains, but had given ten grains thrice daily. Doctor Duncan, in reply, said he did not consider it a specific; he simply had stated what occurred when the drug was given in his cases.—*Medical Record.*

[Our experience with the drug is limited, but satisfactory. So large a dose at first might disagree. We have started with ⅛ grain tablet thrice daily, pushing dose up to one grain.—Ed.]

---

BRONCHIAL CATARRH.—I could not forego *Hydrastis Canadensis* in the treatment of bronchial catarrh, acute as well as chronic, for it enables me to dispense with the use of opium and its derivatives almost entirely in the treatment of tuberculous subjects.

I have employed the form of fluid extract almost exclusively. To adults I give twenty, twenty-five or thirty drops four times a day, in a a little sweetened water; large doses may be used. I have not found the alkaloid so trustworthy as the fluid extract. I have never observed dangerous or unpleasant effects from the doses of the fluid extract, but very large doses may give rise to angina pectoris in the subjects of heart disease and in very debilitated persons.—SAENGER, in *Centralblatt fuer Innere Medicin.*

# PAEDIATRICS.

IN CHARGE OF

ALLEN M. BAINES, M.D., C.M.

Physician, Victoria Hospital for Sick Children; Physician, Out-door Department Toronto General Hospital. 194 Simcoe Street, and

J. T. FOTHERINGHAM, B.A., M.B., M.D., C.M.,

Physician, St. Michael's Hospital; Physician, Outdoor Department Toronto General Hospital; Physician, Hospital for Sick Children. 39 Carlton Street.

## ABSTRACT OF PAPER READ BEFORE THE PHILADELPHIA PEDIATRIC SOCIETY, STATED MEETING, FEB. 8, 1898.

BY DR. D. J. MILTON MILLER.

THE USE OF THE FARINACEA IN THE DIET OF LATER INFANCY.—The writer maintained that although the excessive use of the farinacea during early infancy was now generally recognized as injurious, it was not sufficiently understood that caution should be exercised in administering these articles after the twelfth month.

It is a common experience to see infants who have thrived during the first year suffer continually from indigestion after that age.

This is due to the tendency of the mother and physician to put the child too early upon solid food. Bread, potatoes, strong porridges, and undiluted milk are given, causing frequent digestive disturbances, and, if the practice is persisted in chronic gastric and intestinal indigestion. The most common cause, however, is the excessive use of the farinacea or their administration in forms not readily assimilated. Under the mistaken idea that these substances are light and nutritious, they are given as the staple of diet to the exclusion of milk and the more nitrogenous foods.

The sanction of high authority is given to this practice, as will be seen by consulting most writers on infant hygiene, who recommend after the first year, potatoes, bread, strong porridge, rice pudding, and undiluted milk.

It should be remembered that the power of chewing is not fully developed in most children until well after the second year. The folly of giving bread is thus apparent, while in potatoes the starch granules are difficult of solution. Oatmeal porridge in excess, too, is liable to undergo fermentative changes in the intestinal cause. The result of a diet largely composed of these farinacea is often an intestinal catarrh, induced by the constant irritation of the mucous membrane from the fermentation which the carbohydrates are apt to undergo when imperfectly digested.

The diet in the vast majority of instances best suited to the child during the second year is a nitrogenous one, with a minimum of carbohydrates. Milk should be the staple, and this fluid should not be given undiluted until the eighteenth, twentieth, or twenty-fourth month. The milk should be diluted with gruels or jelly, made by boiling crushed wheat,

barley, or oatmeal, for many hours. To this may be added rare or raw scraped meat, as advised by Holt, after the eighteenth month, and at the twelfth or fifteenth month, fruit juices, as orange juice or baked apple. Potatoes and bread are best omitted until the completion of the second year. The porridges may be given at the twentieth month, the preparations of wheat and barley being selected in preference to the more starchy varieties. Difficulty in digesting the farinaceous foods may be met by the addition of a dry extract of malt, or diastasic essence or extract, a few minutes before eating. This will often liquify the food before the meal is finished.—*Pediatrics.*

---

In the *Archives of Pediatrics* for April there are two very excellent and thoughtful editorials, on The Modern Child, and on Children's Toys. The sophistication of our modern society and the vastly increased complication of our multifarious activity is narrowing the domain of simplicity and domesticity in which alone the child should be reared. Even in Canada, at least in the cities, the child is exposed to the same evils, in kind if not in degree, as in the license-loving cities of the American Republic, where mechanical restraints, want of room, absence of grass-covered plots and breathing room, put a premium on mischief both physical and moral, and tend inevitably to the breeding of a race with unstable nervous equilibrium and other negative disadvantages, quite apart from the positive evil wrought by the vicious habits acquired in the hotbed existence which children, and parents too, perforce lead when brought up in close contact with a crowd. To the subjoined sentiments from the editorials in question we enter a hearty acquiescence.

"To the student of sociology, one of the most notable features of the past decades is the growing attention bestowed upon children. The children are apparently considered a far more important factor in every household than they were fifty years ago. It is at least a fact that they receive more attention and are brought into much greater prominence. The average child of to-day has a score of toys where his grandfather had one. Many children are overburdened with them, and are less happy than they would be with a smaller number. The most contented and quiet children that the physician sees in his rounds are certainly not those with the most playthings.

"We are far from criticising the general tendency to bestow more attention upon childrn and more thought upon their education and training, but it cannot be denied that the matter in many families is carried to a very injudicious extreme. Neither can it be denied that the general tendency is in the direction of bringing children into too great prominence, in making them the most important and first-to-be-considered members of the family, and in laying burdens upon them too great for their strength. These errors are undoubtedly greater in the cities and large towns where the high tension of life is felt by all sorts and conditions of men, by children and adults alike.

"We have before referred to this subject in these pages, and have pointed out the error on the part of some parents, namely, a tendency to adopt the habit of too great *camaraderie* with their children, and the growing tendency to remove the barriers between childhood and age. This naturally results in the feeling that children should enjoy the same pleasures and indulge in the same pastimes as their elders Such recreation is frequently of a character far too stimulating for the sensitive nervous organism of the child. The prevailing tendency of the times is certainly to over-stimulation of children. This tendency pervades our whole educational system. It permeates juvenile literature, it is manifest in childish recreations, and has invaded the home. Such over-straining and stimulation of the mental and nervous organism cannot fail to cause harmful effects during childhood, and frequently produce a neurasthenic and nervous temperament in later. life."

J. T. F.

# OBSTETRICS AND GYNAECOLOGY.

IN CHARGE OF

G. P. SYLVESTER, M.D.,
Corner Isabella and Church Streets.

C. A. TEMPLE, M.D., C.M., F.T.C.M.,
Assistant at St. Michael's Hospital. 200 Spadina Avenue.

## A STUDY OF THE ACTIONS OF QUININE IN ONE HUNDRED CASES OF LABOR.

BY L. J. HAMMOND, M.D., PHILADELPHIA.

I have been prompted to make a clinical study of the action of quinine in the parturient woman from being so frequently confronted with the statement from students that the labor has been so long continued, notwithstanding the fact that they have given quinine, and when questioned why such prompt delivery is expected after the administration of this drug, I am generally told that their text books strongly recommend it, and I believe it is taught in several of the medical schools of this city. My further reason, therefore, for endeavoring to determine its value as an ecbolic was largely to satisfy myself whether or not it possessed the merits claimed for it by many, or if not claimed for it, at least so long and universal a usage has seemed to establish in the minds not only of the students, but also of the practitioners throughout the obstetrical world, a precedent, which seems to place it in the front rank of agents which are supposed to increase the expulsive power of the uterus.

That it has so long and universally been administered to parturient women is not, I take it, sufficient argument either for or against it without an effort being made to determine just what amount of clinical difference obtains in a sufficient number of cases between uterine actions after and before its administration. In order to do this it seems to me necessary to secure enough cases similar in their action to accomplish this object. I have therefore endeavored to select one hundred cases as near alike in the behavior of their labor as was possible, a detailed study having been made of the character of the labor before—that is, the frequency of contractions and interval between the contractions. The drug was then given in ten-grain doses and repeated every half hour until thirty grains had been administered.

The first observation was made one-half hour after the administration of the drug and in the beginning of the second stage, and repeated every half hour until the labor was terminated. No case was used for the investigation where the second stage was so far advanced as to justify the belief that it would terminate within an hour, neither were any cases used which might be termed under the head of irregular labor—that is, those where labor was rapidly precipitated; nor were any used where

there was any abnormality in the relative size of the fœtal to the maternal parts. There were a few in this group of cases where it was necessary to terminate the labor instrumentally. This was due entirely to my inability to determine from the earlier portion of the labor whether there was this relative difference in the size of the presenting part to the maternal.

The detailed method of making the observations was as follows: Duration of the contraction and the interval between contractions before the drug was given, which I have tabulated in one column, the hour of administration of the drug, duration of the contraction and the interval between contractions after administration of the drug have been noted in another column; the duration of the contractions being calculated in seconds and the interval in minutes. The duration of the labor previous to the administration has also been noted, as well as the stage in which the drug was given, frequency of administration and frequency of observation, together with the behavior of the uterus after the termination of labor. These, I say, have all been noted in tabular form.

Both primiparas and multiparas have been used. In the case of the latter (m), an effort was made to determine the character and duration of the previous labors, but it was found to be so unsatisfactory that it was abandoned, the number of primiparas being thirty-eight (38), multiparas sixty-two (62).

There were never less than five (5) nor more than seven (7) observations recorded except in two or three cases, where four (4) were made, owing to the rapidity of the termination of labor, and as so large an amount of time wonld be consumed in reading these half-hour observations, I have endeavored to boil it down sufficiently to make clear the results of the investigations without too greatly wearing upon your patience, and with this object in view have endeavored to take the maximum number of seconds and the minimum number of seconds and the maximum minutes of interval and the minimum minutes of interval before the drug was given and compare them with the maximum number of seconds and the minimum number of seconds and the maximum minutes of interval and the minimum minutes of interval after the drug was given. Usually from three to five observations were made before administration of the drug, no observation being made during the very last moments while the head was passing through the vulva.

The study of the action of the uterus after being empied of its product of conception was to note, first, whether any excess of bleeding, second, whether firm contraction immediately after it was emptied, third, whether any condition of hour-glass contraction took place.

As the report shows, but five evinced any tendency to excessive bleeding, and in no case was there any contraction of the lower segment (hour-glass) noted. In all the rest the uterus promptly and permanently retracted after prompt expulsion of the placenta.

In but one of the cases was the temperature, pulse or respiration sufficiently disturbed from the normal course to be noteworthy, and that was in the third case in the table, which shows pulse 110, respiration slow, 14, temperature normal.

In comparing the frequency of contractions in multiparas with those of primiparas, we find that the interval between contractions is slightly longer in the former than in the latter, while on the whole the duration of contractions in multiparas is longer than that of the primiparas.

I think it is important to state that these observations were made on women living in courts and alleys, mostly in the extreme lower section of the city, where the sanitary conditions, as well as the food stuffs used, were far below what is necessary for the safety and comforts of life. The district is said to be the most malarious in the city, and taken all in all, I believe this class of women to be an ideal one for securing the best results from any therapeutic agent whose benefits are supposed to be produced by its action as a tonic.

I realize the great difficulty in determining just what amount of the increase both in the duration and frequency of contractions that are noted in these observations are due to the action of quinine; first, because it is well-known that as the second stage of labor progresses the interval between contractions is diminished, as well as the duration of the contractions increased. The prompt increase, however, in the duration of contraction and the diminution of the interval between contractions, which is so uniformly shown to have occurred in this series of cases, and in the hands of twenty-five (25) different observers, would seem to justify the belief that this drug does exercise a marked influence on the expulsive powers of the uterus, and I am quite satisfied that, given a woman whose muscular system is below par and an atonic condition of all the muscular structures of the body, I believe the administration of quinine, begun in the early stage of labor, will not only increase the expulsive powers of the uterus by its general tonic action, but it will also, through this same action, tend greatly toward lessening the dangers of septic invasion, which this class of cases is particularly liable to, owing to this impoverished condition of the system. In other words, it has been my experience to find that uterine inertia, which is said by some to be so common, is extremely rare, and is found only in the class of cases that I have here described. From a large experience, both in this class and in a better class of cases, I am convinced that the so-called uterine inertia does not exist in any other class of cases than that where all the other muscles are tired, or, more properly defined, where there is general muscular atony.

As above intimated, these investigations were, many of them, made by the students of the University of Pennsylvania, though entirely under my supervision.—*American Gynæcological and Obstetrical Journal.*

---

Malnutrition in Infants.—The following emulsion is recommended as useful in cases of rickets or chronic malnutrition:

℞ Olive oil ..... ℥iii
Glycerine ..... ℥iss
Yolks of two eggs .....

Make an emulsion and add one-half minim of creosote to each drachm —*Ex. Pædiatrics.*

# MEDICAL SOCIETY REPORTS.

## TORONTO CLINICAL SOCIETY.

The forty-sixth regular meeting of the Toronto Clinical Society was held in St. George's Hall, Toronto, May 11th, 1898.

President, Dr. Albert A. MacDonald in the chair. The following Fellows were present: A. A. MacDonald, J. A. Temple, G. S. Ryerson, W. H. B. Aikins, A. Primrose, G. A. Peters, G. Boyd, F. Fenton, H. A. Parsons, A. Baines, W. Oldright, R. Dwyer, J. N. E. Brown.

Dr. Brown gave notice of motion, that in view of the fact that the Clinical Society had its full quota of Fellows, and as there was a number of eligible applications for fellowship, any Fellow absenting himself from all of the meetings of the Society for one year should have his name struck from the roll.

Dr. William Oldright presented a boy aged six whom he had operated upon for talipes equinus, doing a tenotomy of the tendo achillis. The patient was aged six, and the trouble had been in existence since he was — years of age. The affection had supervened after a long walk. Photographs before and after the operation were shown. He had applied a plaster Paris splint to keep the foot in the corrected position. The boy was wearing a thick-soled shoe on the affected side.

Dr. Primrose stated it to be his experience that most cases of talipses equinus were the result of injury. He reported a case following a gun-shot wound.

Dr. Primrose reported a case of gun-shot wound in which the bullet had entered the palm of the hand and had passed completely through the carpus, and lay situated on the dorsal aspect of the wrist below the head of the ulna. The "X rays" revealed the situation of the bullet, and only a small incision was necessary to extract it.

The doctor reported a second case, that of a boy who was accidentally shot by a 44-calibre revolver last Christmas. The bullet entered the body at about the level of the 10th rib, three or four inches from the median line. It was probed for at the time unsuccessfully. The wound healed up. About eight months after the boy complained of pain in the hypochondriac region. This followed by the vomiting of blood, and purulent material. The patient became very weak. The "X rays" were used and showed a tumor of the left hypochondriac region. A tumor in this region could be felt, and it was a question whether it was in the abdominal wall or not. An exploratory incision revealed an enlarged spleen. It appeared from inquiry that the patient had suffered from malaria, although the blood count showed only 220 thousand white corpuscles.

Dr. Primrose reported a third case in which the patient was injured from the bursting of a gun. The man had been experimenting with smokeless powder and had used too heavy a charge. The left arm was severely lacerated by a piece of the barrel. It was probed for but could not be felt. The "X rays" showed it distinctly lying between the bones

of the forearm. In the upper arm there was a piece of the barrel ¼ of an inch square to be seen in front of the humerus. A good deal of cellulitis had set in. Operation was done, the piece in the lower arm being found, the upper one not. The patient was improving. An interesting nerve involvement had taken place, involving the median and ulnar nerve.

Dr. Boyd who had charge of the case, Dr. Primrose reported first, said he was able to reach the bullet with a probe, but thought it wise not to attempt to extract it through the palm for fear of dangerous hemorrhage.

Dr. Parsons discussed the question of leucocytosis in malaria, pointing out that as long as the malarial organisms exist in the body the leucocytes will not increase, but as soon as quinine is administered there is a regular inflammatory leucocytosis.

Dr. Primrose closed the discussion.

Dr. W. Oldright presented a patient upon whom he had resected a portion of two ribs for necrosis.

Dr. Oldright presented another patient from whom he had removed a wedge-shaped portion of the first meta-tarsal bone to correct a mal-position of the great toe, caused by a bunion.

Dr. J. A. Temple presented a specimen of an ectopic gestation which he had removed from a woman aged 24, mother of one child. Two weeks before she consulted him she suffered from pain in the left side. She had missed two periods. The rupture had induced a state of collapse. After a good deal of persuasion an operation was consented to, and done at 11 p.m., when the patient was almost *in extremis*. The abdomen was found full of blood and the break close to the cornu of the uterus; so close, indeed, that the corner of the uterus had to be transfixed to secure the pedicle. Hypodermic and rectal administration of stimulants was resorted to, and the woman made a good recovery. One point that had rendered the diagnosis more difficult was that the woman positively asserted that she was not pregnant. She stated that she had missed her periods frequently.

The text-books would lead us to believe, Dr. Temple asserts, that this accident occurs only in women near the menopause, or those who have borne no children for some years. The above cases, with several others he had seen, led him to disagree with this statement of the authors.

Dr. MacDonald discussed the question of pain in ectopic gestation and the causation of the trouble.

Dr A. Primrose presented a hernial mass containing a piece of the omentum, adherent to the sac. This procedure, he stated, shortened the operation very much.

Dr. King presented two similar specimens, in the removal of which he had followed a similar plan.

Dr. W. Oldright discussed the question.

The election of officers for the coming year was then proceeded with, and resulted as follows:

President, F. Le M. Grasett.

Vice-President, G. A. Bingham.

Corresponding Secretary, H. A. Bruce.

Recording Secretary, John E. Brown, re-elected.

Treasurer, W. H. Pepler.

Council, W. B. Thistle, G. Boyd, F. Fenton, H. J. Hamilton, and G. Chambers.

The retiring President, Dr. MacDonald, was then tendered a vote of thanks for the acceptable manner in which he had presided over the meetings for the past year. He, in a few words, expressed his thanks to the Society for their appreciation of his efforts, and for the assistance they had given him during the year.

The Society then adjourned for refreshments. The next meeting will be held on the 2nd Wednesday in October.

---

## TORONTO MEDICAL SOCIETY.

The last regular meeting of the Society for the year was held in the Council Building on the 26th May, 1898.

Dr. T. F. MacMahon presided.

The minutes of the previous meeting were read and adopted.

Dr. H. Hook Oldright read a paper on "Tuberculous Inguinal Glands," resulting from wound in the foot. It was discussed by Drs. Parsons, Smuck and Oakley. Dr. Graham Chambers reported a case of Purpura Hæmorrhagica.

Dr. Webster reported a case and presented a patient—general septic arthritis. A number of the larger joints he had drained. The patient began to improve after the administration of antistreptococcic serum.

The treasurer's report was then received and adopted.

Dr. Parsons moved that the meetings be held fortnightly instead of weekly. Lost.

The motion to lower the fee was withdrawn.

Dr. W. J. Wilson moved: "That in the opinion of the Toronto Medical Society no one should receive free treatment as an in-door patient in our public hospitals except those receiving their hospital maintenance from the municipality to which they belong;

"That a copy of this resolution be sent to the public Hospital Boards and to the Medical Council;

"That the president, and Dr. B. E. McKenzie and the mover be a committee to see that the spirit of the resolution be carried out;

"And that the Secretary communicate with the other medical societies with a view to securing their co-operation in the matter."

Carried unanimously.

The Society then adjourned.

The election resulted as follows: President, A. Primrose; 1st Vice-President, F. Oakley; 2nd Vice-President, J. Webster; Corresponding Secretary, M. Currie; Recording Secretary, J. N. E. Brown (re-elected); Treasurer, G. H. Carveth (re-elected); Council: W. J. Wilson, J. E. Graham, and T. F. MacMahon.

The Society then adjourned until the first Thursday in October.

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.

EDITOR:
JOHN L. DAVISON, M.D.

ACTING EDITOR:
J. T. FOTHERINGHAM, M.D.

ASSOCIATE EDITORS:

*Surgery:*
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine:*
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology:*
G. P. SYLVESTER, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics:*
CAMPBELL MEYERS, M.D.

*Pathology and Bacteriology:*
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat:*
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D.

*Pædiatrics:*
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M.D.

*Eye and Ear:*
G. STERLING RYERSON, M.D.
C. TROW, M.D.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* The Canada Lancet Publishing Co., 24 Wellington St. W., Toronto.

FRED. H. GRAY, Business Manager.

**The Largest Circulation of any Medical Journal in the Dominion.**


## Editorial.

### LEGISLATION FOR INEBRIATES.

This exceedingly important subject seems to be at last on the eve of securing a fuller measure of the public interest and attention that it so much deserves. The benevolent profession of Medicine has long had well defined views on the matter, and has done at least a part of its duty in mitigating the ferocity (this is not too strong a term) of public opinion as to the social status of the unfortunate *habitué* of alcohol. The part played in this educational campaign by the Prisoners' Aid Association of Canada, whose President is Hon. S. H. Blake, Q.C., and Secretary Dr. A. M. Rosebrugh, is most praiseworthy, and should be vigorously seconded by every practitioner in the Province. Fresh interest has been lent to it by the recent attempt of that huge monopoly, the Keeley Company, to get control of the treatment of inebriate prisoners in the county gaols and Central Prison of the Province, and so arrogate to itself influence from the ægis of the Provincial authority, and reputation for charitableness at the same time. Fortunately the Prisoners' Aid Association when approached

succeeded in putting itself publicly on record against the Keeley Company and all its works in a way that should leave the profession and public in no doubt as to the soundness and positiveness of their principles. An organization which has made Keeley a millionaire fifty times over from the frailties of the unfortunate, as we are assured the Keeley Company has done, is not in urgent need of assistance from philanthropic associations or individuals, but should rather be given a wide berth until it proceeds to spend some of its own gains in the succouring of those who need assistance against drug-habits.

*The British Medical Journal* in its issue of April 30 has an editorial giving the present status of legislation of this kind in Britain. For the purposes of the Inebriates Act habitual drunkards are arranged in two classes, criminal and non-criminal..

Public opinion is still largely set in the direction of punitive, retributive treatment of these cases, rather than of preventive and curative treatment, and the people will, in our judgment, learn differently mainly through our teaching and influence as medical men.

"The Habitual Inebriates Bill, introduced by Sir Matthew White Ridley last Monday, proposes that the State or local authority shall provide inebriate reformatories for criminal inebriates convicted of grave crime, and that certified inebriate reformatories shall be provided by voluntary enterprise, aided by a Treasury grant, for habitual inebriates guilty of minor offences, such as police-court repeaters. Some amendment of the practical working of the Inebriates Acts is proposed, but we regret to see no provision for the attestation of a non-criminal habitual inebriate's request for admission and detention, by one justice instead of by two justices as at present. Disappointment will be felt by many at the absence of any expression of an intent to provide for the compulsory therapeutic restraint of non-criminal habitual drunkards, so loudly called for and urgently needed; but we appeal with confidence to every member of the Association to do his utmost in supporting the Government in their amended legislation for the substitution of sound medical and reformatory treatment, in lieu of the existing inefficient penal system of fine and imprisonment, which neither reforms nor deters."

At the January monthly meeting of the Executive Committee of the Prisoners' Aid Association Dr. Rosebrugh was commissioned to visit American Inebriate Hospitals and to interview specialists in alcoholic inebrity. The Doctor has executed his commission and presented his report. With regard to the question of efficiency of treatment in inebriety, the results of his enquiries are as follows:

"Between 80 and 90 per cent. remain sober for periods varying from a few weeks to several months, but that only 35 per cent. are permanently cured. Out of 10,000 cases treated at the Washington Home, Boston, previous to 1885, 34 per cent had remained total abstainers for over ten years. Dr. Mason, of Brooklyn, followed the history of 600 cases for ten years, and 34 per cent. were still sober men. From correspondence with Hon. Mr. Eustis, ex-mayor of Minneapolis, Minnesota, I learn that about two years ago some fifty-seven discharged prisoners from the county workhouse were given medical treatment for inebriety, and that at

the end of a year and a half only one half had relapsed, although many, if not most of them, had been convicted for drunkenness several times—one of them twenty-eight times.

"If from 33 to 50 per cent. of prison inebriates can be reclaimed by medical treatment, as these statistics would seem to indicate as being possible, the Government would certainly be justified in introducing the treatment in the Ontario prisons. Rather, it would be negligent of its duty if it did not do so. The subject is worthy of the serious attention of temperance organizations as well as of the Government. Dr. Rosebrugh makes the following reccommendations, founded upon the information gained by his recent visit and from his knowledge of the subject generally :

"1. For male inebriates (a) the establishment in Ontario by the Government of an industrial reformatory on the farm colony plan, and reserving this for the more hopeless class who should be committed on the indeterminate sentence system. (b) *Utilizing local hospitals* throughout the Province, and the establishment of *a special hospital in Toronto* for a few weeks' treatment of the more hopeful class of pauper inebriates. (c) Pending the establishment of an inebriate hospital in Toronto—supplying the inebriate inmates of the Central Prison with medical treatment for inebriety, and preferably under the supervision of our association.

"2. For female inebriates, (a) sending the more hopeless class to the Mercer Reformatory on indeterminate sentences or on maximum sentences for two years. (b) For the more hopeful class of female inebriates, commencing in Toronto, either the establishment of a special home in Toronto, or utilizing some of the existing homes for a course of three or four weeks' special medical treatment of this class.

"3. With a view both to *economy and efficiency* in giving practical effect to the foregoing recommendations, and for the purpose of the establishment of a new era in Ontario for the treatment of pauper inebriates—calling upon the Ontario Government *to appoint an Inspector of inebriate hospitals.*"

The profession should, we think, use their very great influence upon the communities in which they live, so that a public opinion can speedily be created which will induce the Legislature to carry out some such plans as those suggested by Dr. Rosebrugh. For there is no doubt that in spite of the proper British hesitancy to legislate against the liberty of the individual, the demands not only of public advantage, but of the good of the unfortunate and those who suffer with him have long ago justified public action in the matter. Legislation of this kind would, in our opinion, be vastly preferable to any abortive attempts at total prohibition of the use of alcohol.

---

## INTERNATIONAL ASSOCIATION OF RAILWAY SURGEONS.

The eleventh annual meeting of the members of the above Association will be held in Toronto, commencing July 6th, and they will remain in session for three days.

The convention will meet in the auditorium of the Education Depart-

ment, St. James' Square, where there will also be a display of surgical instruments and physicians' supplies shown by foreign and Canadian manufacturers and agents, in the Drill Hall or Gymnasium immediately in the rear of the Auditorium.

It is anticipated that the attendance will be very large—the present membership of the Association being nine hundred, and applications for membership are coming in more rapidly as the meeting approaches.

The programme of papers is not available yet, but will mainly deal with traumatic surgery, car sanitation, etc.

One of the most interesting features of the coming meeting will be the symposium on Shock, the preliminary programme for which is:—

SHOCK—I. Nature and Pathology. Leading paper by Dr. F. J. Lutz, St. Louis, Mo. A resumé of an Experimental Research into Surgical Shock, by Dr. Geo. W. Crile, Cleveland, Ohio.

II. Varieties and Causes—Predisposing and Active. We have not the names of readers of papers for this section yet.

III. Symptoms—Diagnosis and Prognosis. Leading papers by Dr. Jabez N. Jackson, Kansas City, Mo., and Dr. S. R. Miller, Knoxville, Tenn.

IV. Prevention and Treatment. Leading paper by Dr. James H. Letcher, of Henderson, Kentucky.

It is proposed that the welcome of the Association and the President's annual address will take place on the evening of the first day of meeting,

Dr. George Ross, of Richmond, Va., being President; and

Dr. Bruce L. Riordan, of this city, Chairman of the local Committee of Arrangements.

The Rossin House has been selected as headquarters.

An afternoon water trip has been arranged, and an excursion of the members to the Muskoka district will take place on Saturday, July 9th, the day following the closing of the meeting.

The Grand Trunk Railway will run a special train of Pullman coaches from Chicago to Toronto for the accommodation of the western delegates. Invitations to be present at the meeting will be sent to the Presidents of all the Canadian Medical Associations.

## EDITORIAL NOTES AND CLIPPINGS.

### DIET IN TYPHOID FEVER.

Dr. F. C. Shattuck (Jour. Am. Med. Association) says:

"During the twelve years, 1886 to 1897 (both inclusive) 380 cases of typhoid fever have come under my personal care in the Massachusetts General Hospital. From 1886 to 1893, 233 cases were treated under a milk diet, with a mortality of 10 per cent. From 1892 to 1897, 147 cases have been treated under a much more extended diet, with a mortality of 8.1 per cent. I know well the liability to reach false conclusions, in reasoning from too small figures in a disease like typhoid fever; and it is also true that water has been used more efficiently of late than in former years. But I can see nothing in my figures to contravene my observation

that an enlarged diet has not been injurious. I would not be understood as advocating an indiscriminate diet. My plea is simply for treating the patient rather than the disease; for feeding him with reference to his digestive power rather than solely or mainly with reference to his fever; for the view that the danger of accidents from the local intestinal ulceration is not increased by allowing him to partake of articles which leave no irritating residue, and which cautious trial shows are digested without disturbance or discomfort. At one end of the scale are the cases with such irritability or weakness of the stomach as to lead to the unfortunate term gastric fever, or those with pronounced diarrhœa and undigested food in the stools; at the other end are those more numerous cases with clean tongue and a desire for food. Between the two is every gradation. The line of the former may depend on the skill and ingenuity of the doctor, assisted by the intelligent devotion of the nurse. The comfort and the duration of disability of all others may be materially modified for good by careful study and wise individualization of our cases. A long list of permissible articles, from which selection can be made for different cases, and for the same cases at different times under varying circumstances, can be given. That which I append makes no claim to completeness, but is meant merely to be suggestive and illustrative:

Typhoid Diet.—1. Milk, hot or cold, with or without salt, diluted with lime water, soda water, apollinaris, vichy; peptogenic and peptonized milk; cream and water (*i.e.*, less albumin); milk with white of egg, slip, buttermilk, koumyss, matzoon, milk whey; milk with tea, coffee, cocoa.

2. Soups: Beef, veal, chicken, tomato, potato, oyster, mutton, pea, bean, squash; carefully strained and thickened with rice (powdered), arrowroot, floor, milk or cream, egg, barley.

3. Horlick's food. Mellins' food, malted milk, carni-peptone, bovinine, somatose.

4. Beef juice.

5. Gruels: strained cornmeal, crackers, flour, barley-water, toast-water albumin, water with lemon-juice.

6. Ice cream.

7. Eggs, soft boiled or raw; egg-nog.

8. Finely minced lean meat, scraped beef. The soft part of raw oysters. Soft crackers with milk or broth. Soft puddings without raisins. Soft toast without crust.

Blanc mange, wine jelly, apple sauce and macaroni.

---

## THE FOLLY OF AN EXCLUSIVE MEAT DIET.

The non-digestion of starch is unquestionably one of the most common causes of disordered digestion.

This is doubtless the chief cause of the extensive use of beef and other forms of flesh food in this country. Meat is readily dissolved in the stomach, and its digestion is not accompanied by the flatulence, acidity and other distressing symptoms present in amylaceous dyspepsia.

A beef diet is the most ready means of obtaining relief from these

annoying symptoms, and hence is one of the most common diet prescriptions made by physicians, and one which is, perhaps, more frequently than any other, made use of by patients for themselves.

The result is relief from a certain set of symptoms, but at the same time the development of others which, if less disagreeable, are in the end not less serious.

An exclusive meat diet robs the system of its proper supply of fat, and overwhelms the body with a great quantity of ptomaines, leucomaines, and of tissue poisons, which decrease the resistance of the body to disease.

Bouchard, Rogers and others have shown that the poison-destroying function of the liver depends upon, the amount of glycogen which it contains.

This is almost exclusively derived from the starch of "farinaceous foods;" hence a person who, in consequence of inability to digest starch, confines himself largely to meat diet, is exposed to the double injury—the introduction of toxic substances into the system and the lessened ability to destroy toxines and ptomaines.

The dyspeptic who is suffering from the inability to digest starch, in exchanging a farinaceous for a flesh diet, simply exchanges one class of morbid condition for another, the biliousness or general toxæmia, the uric acid diathesis, and the resulting rheumatism, neurasthenia and allied conditions which proceed from a meat diet being far more serious in their ultimate effects than the acidity, flatulence, and other annoying symptoms experienced from the indigestion of starch. The fermentation of proteids in the stomach, intestines and colon, which always accompanies a flesh diet, produces toxic substances of a peculiar character, while the fermentation of starch results in the formation of acids and gases which are annoying and irritating, but not to any degree toxic.

The substitution of a meat diet for one consisting of farinaceous foods, while a convenient mode of dissipating certain unpleasant symptoms, is, nevertheless, not the best remedy for this condition.

What the patient requires is not the withdrawal of starchy foods, but the ability to digest them.

---

## SURGEON-CAPTAIN B. H. SCOTT.

In the Illustrated London News for May 14th. 1898, there appears an excellent photograph of a graduate of Trinity Medical College and Trinity University. The "personal" accompanying it speaks for itself, and we are pleased to reproduce it. The Army Medical Service traditions are evidently being bravely kept up by the Canadians who enter it.

"Surgeon-Captain B. H. Scott of the Army Medical Staff, who was severely wounded while taking part in Major Norris's march between Karene and Port Lokko, had been on the west coast of Africa but a couple of weeks when he was despatched as medical officer to the expeditionary force under Major Norris. He had previously seen active service with the Chitral Relief Expedition. Surgeon-Captain Scott's wounds were, unhappily, very severe. The bone of his left thigh was broken, and a bad flesh wound over the heart added to his suffering. Yet he behaved with

the utmost courage and self-sacrifice, and, as the only medical officer of the force, insisted on removing many bullets from the wounded soldiery and otherwise alleviating their distress, while all the time he had himself to endure a painful journey of three days' length before he could obtain medical relief. He is now on his way home, and it is hoped that by means of the Rœntgen-rays he may be relieved of the bullets which have not yet been extracted from his wounds."

Captain Scott is a nephew of that favorite *emeritus* of Trinity College, Professor Covernton of this city, and should his furlough bring him back to Canada he will meet with a warm welcome from his many friends.

---

### ENURESIS.

The following formula is given by Alfred Hand, Jr., M.D., of Philadelphia, as having effected a complete apparent cure in a very severe case of enuresis in a boy of 2¾ years, in whom all other measures had failed, including circumcision. The pill was ordered as a nervine tonic for the mother, who, by mistaking the directions, gave them to the child, instead of taking them herself, with happy results this time.—J. T. F.

℞ Ext. Cannab. Ind.....gr. ⅛
Hyoscyamia.....gr. $\frac{1}{100}$
Zinc Phosphid.....gr. $\frac{1}{10}$

—*Paediatrics.*

---

It is important from a medico-legal point of view to remember that from an injury to the back we may have unsuspected fractures of some of the vertebræ and that, although there may be no head symptoms and no head injury and no paralysis, yet the injury inflicted may be of a fatal nature, although life may be prolonged for several days, until death occurs from some accidental movement.—*E. C. Mann.*

---

## Book Reviews.

THE excellent work of Dr. C. K. Mills, of Philadelphia, on the Nervous System and its Diseases, so fully reviewed in our May issue, is to be had of A. P. Watts & Co., 10 College St., Toronto.

---

THE SAFE METHODS OF USING ANÆSTHETICS AND ANALGESICS. By H. H. Oldright, M.D., Assistant Surgeon to St. Michael's Hospital Toronto. A. P. Watts & Co., publishers, 10 College St., Toronto.

This monograph, reprinted from the *Canadian Practitioner*, is an exceedingly useful *resumé*, historical, clinical and practical, on the subject. The experience of the writer is extensive, and his brochure is a very readable one. It will be useful particularly to the student, from whom now a special course of instruction is demanded as preliminary to the license to practise in Ontario. A very excellent short statement of the more useful means of resuscitation in threatening death under anæsthesia closes the little work.

A COMPENDIUM OF INSANITY. By John P. Chapin, M.D., LL.B., Physician in Chief Pennsylvania Hospital for the Insane. Pp. 227. W. B. Saunders, Philadelphia.

We have in this little book from Dr. Chapin's pen a clear and concise description of the several forms of insanity given with directness and accurateness, making it valuable for general practitioners, students and members of the legal profession. The writer modestly calls it a compilation but every page reflects the man of wide experience, and has a personality of its own.

There are several chapters on the four chief divisions of mental diseases, namely, mania, melancholia, dementia and paresis, which the writer considers a sufficient classification for the general practitioner; another important chapter on the actions of the insane, and others upon abnormal psychical states, not included in the foregoing, and morbid anatomy.

The elaborate classifications and fine distinctions which the European alienists lay so much stress upon are not much more than mentioned.

The perplexing question of home or institutional care and treatment are taken up with each class of cases, general rules being given to guide the family physician, and the dangers of home treatment pointed out, but we are pleased to see that it is advised in certain cases, providing proper facilities can be obtained. The decrease of puerperal insanity, owing to antiseptic methods in obstetric practice, is shown by the writer's statement that for a period of ten years preceding the year 1897 twenty cases of acute puerperal insanity were admitted at the Pennsylvania Hospital for the Insane, while for a corresponding period preceding 1877 ninety nine cases were received.

Wholesome advice regarding the care of patients, the signing of certificates of lunacy and the medico-legal aspect of the cases is given, and the book closes with a chapter on feigned insanity. As we lay it down, it is with the hope that the writer will give to the medical world the benefit of his forty years' experience in a more extended treatise on insanity.

---

SAJOUS' ANNUAL AND ANALYTICAL CYCLOPÆDIA OF PRACTICAL MEDICINE. Cloth, $5.00; half Russia, $6.00. The F. A. Davis Company, publishers, Philadelphia.

For years there has been a constant and increasing chasm between the generally-accepted facts in medicine and surgery and that which is more or less subject to debate. There was once a happy time, years ago, when the average doctor learned his trade and practised it in peace and quiet thereafter. But those days have gone, never to return.

A great relief was afforded by Sajous' Annual in classifying the periodical literature, especially to those who have taken each consecutive issue; but there is nothing so good that it cannot be improved upon; and thus, after many years of careful consideration, the editor has worked out what is believed to be the solution of the whole problem.

A large number of busy, general practitioners, who not only feel the financial tax for medical works quite severely, but find that the possession of a large reference library only entails a corresponding amount of labor in using it, look upon Dr. Sajous' plan with particular favor.

The new publication has the alphabetical arrangement, and comprises a concise statement of the generally-accepted methods in vogue, in one style of type, while in a different type, on the same page, can be found the opinions of well-known authorities bearing upon whatever may be debatable regarding the subject in hand. This alphabetical arrangement will consider all the practical subjects of medicine and surgery and the clinical application of therapeutics. It will appear at the approximate rate of one volume each six months, the whole alphabet being thus covered in three years, and during this time a monthly supplement (The Monthly Cyclopædia), alphabetical from A to Z, will be brought out; so that a doctor can have a complete synopsis of the latest journal literature to reinforce his system of reference.

Subscriptions are taken for the entire series only at $5.00 per volume, in cloth. This secures a large six-volume reference system, with thirty-six monthly supplements during that period.

The volumes will be beautifully illustrated; each volume will be handsomely bound in two colors of cloth. The half-Russia binding will be furnished at $6.00 per volume, if desired.

# PUBLISHERS' DEPARTMENT.

## A WORLD-WIDE BUSINESS.

### HOW PARKE, DAVIS & CO. ACHIEVED THEIR GREAT AND ENVIABLE FAME.

#### THEIR CANADIAN BRANCHES, WALKERVILLE AND MONTREAL.

It is no exaggeration, it is merely stating a well-known fact, to say that the house of Parke, Davis & Co. is the "foremost pharmaceutical house in all the world." Its prominent position has been attained by steady adherence to scientific methods and to the policy that *quality* and *reliability* should be synonymous with their label.

Parke, Davis & Co. have always led in the advance guard of scientific pharmacy. The improvements which they have effected in pharmaceutic preparations have done much to place the science and art of medicine on a surer and more definite basis, and humanity has been correspondingly benefited. Parke, Davis & Co, for instance, was the first house to advocate the principle of standardization as applied to the preparations of drugs containing alkaloids, etc., that were capable of being chemically assayed. They were the first to place standardized preparations of such drugs upon the market, and the medical profession so warmly endorsed their action in this respect that the last revisers of the United States Pharmacopœia felt constrained to fall into line and give official recognition and approval to the principle.

Chemical standardization alone, however, does not represent the Ultima Thule of this matter. There are some drugs, such as Indian Cannabis, Digitalis, Strophanthus, Squill, Cantharides, Ergot, etc, that cannot be satisfactorily standardized by chemic test. Parke, Davis & Co. now stand as the first advocates for the further application of the principle of standardization to these, which can only be done satisfactorily by test upon living organisms, *by physiologic test.*

It is not our intention to here picture the magnificent biological laboratory which Parke, Davis & Co. have erected to efficiently prosecute the standardization by physiologic test of the drugs above referred to. It is rather, as an illustration of the progressive methods characteristic of the firm's policy, explanatory of the unqualified praise which is accorded to their products wherever they go. The medical men who use Parke, Davis & Co.'s preparations know that in them they possess the most reliable, up-to-date, scientific instruments of Materia Medica. The keynote of the ever-increasing favor, therefore, which compels Parke, Davis & Co. to keep enlarging their manufacturing facilities, to multiply their branch houses and their agencies, is typified in their trade-mark, "*Medicamenta Vera.*"

WALKERVILLE BRANCH.

The establishment of the Walkerville, Ont., branch laboratory of Parke, Davis & Co. is only one of many instances which go to show the wonderful growth and expansion that is steadily marking the career of this great firm. Appreciating the favor which had already been manifested towards their products, Parke, Davis & Co. decided to meet the demand for them by a purely Canadian enterprise, which would be able on Canadian soil to operate under much more favorable commercial conditions. Accordingly, in 1887 they erected a modest building which was estimated to be sufficient for their Canadian trade at that time and also for some time to come. The very encouraging success which immediately attended this effort made it at once apparent that a larger building was necessary, and in 1890 they moved to a large, handsome new laboratory. Now a third enlargement of premises has been found necessary to meet the rapid development of their Canadian trade, and an additional two and a quarter acres of land have been added. On this is now in course of construction a four-storey building, 60 by 100 feet, that will give, with other minor improvements, 25,000 additional feet of needed floor space. This will then yield employment to about 125 people, exclusive of their ten travelling representatives, who are scattered all over the Dominion.

In the Walkerville laboratory of Parke, Davis & Co. every preparation receives the same care, is brought up to the same standard, must respond to the same tests, as those emanating from the huge parent laboratory in Detroit. Their preparations may be relied upon in precisely similar conditions to yield precisely similar results, since all chemic and physiologic tests are identical in the control of their manufacture. In only one series of preparations has it been considered unadvisable to duplicate manufacturing facilities, and that is in the preparation of Anti-Diphtheritic Serum; this is still manufactured exclusively in Detroit. All crude drugs purchased after a physiologic test of submitted sample are procured through the Detroit laboratory, in order to insure the animal tests being uniformly applied. With access to the same staff of chemical and botanical experts which has helped so materially to build and maintain the reputation of the parent firm, it can readily be assumed that the products of the Walkerville manufacturing branch may be relied on as fully as those issuing from the Detroit laboratory on the opposite side of the magnificent river upon which they both stand.

MONTREAL BRANCH.

So much delay has been complained of in shipments to Eastern Canada that Parke, Davis & Co. have often been strongly urged to establish a depot or branch which would serve as a distributing centre on or near the Atlantic coast. Since the transit delay was ascertained to be located chiefly between Walkerville and Montreal, they decided that a branch house in the latter city was almost a necessity, and that its establishment would afford tangible relief to a large number of patrons in the eastern part of Ontario, the Province of Quebec and the Maritime Provinces. The branch is located in the centre of the wholesale district of Montreal, No.

378 St. Paul St., and will carry a *complete* stock of Parke, Davis & Co.'s preparations, although for the present it will not be a manufacturing laboratory. It is recommended as a base of supplies to all those living sufficiently near Montreal to expect a lessened time of transit in their shipments than would be the case if ordered from Walkerville.

Speaking of Canadian trade brings to notice the other evidences of high appreciation which Parke, Davis & Co.'s products receive from the medical men who are subjects of Queen Victoria. As a profession they are second to none in the world, and there are none who more carefully scrutinize, more carefully examine and test their preparations, nor who afterwards more thoroughly endorse them. A large manufacturing laboratory is maintained in London, England, at No. 21 N. Audley St. (No. 451 Oxford St.), Grosvenor Sq., W., which has been steadily increasing its plant, and its products, meeting with increased favor ever since its installation. Not only has Parke, Davis & Co. a large demand for their preparations in Great Britain alone, but from the remotest corners of the globe have come most unexpected demands for them—in fact, from wherever an educated physician is to be found. They experience constantly opening new and unlooked-for channels of export for their goods, and even a partial list of their branch establishments and agencies is a formidable one. Parke, Davis & Co. maintain a special corps of travelling representatives in Australasia, and they have no less than fourteen depots for the supply of their products in that remote continental island. In New Zealand they have seven. In British India they have five (one of these being in Ceylon). In the Hawaiian Islands they have three, and in China two. On the continent of Europe they have six. Other countries where but one agency or depot is maintained, are Egypt, Japan and Java. This is not inclusive of a large number of wholesale houses in Mexico, Central and South America and the West Indies, who carry their products in stock.

In New York city, Parke, Davis & Co. do an immense distributing business; here, also, they conduct a special and distinct enterprise, their Crude Drug Department, which does a vast importing and jobbing business in medicinal herbs, barks, leaves, resins, insect powder, etc. Wherever they have established branches in the United States their business has advanced with the same rapid strides which have characterized their Canadian trade. They have also large and completely equipped stocks located in Kansas City, New Orleans and Baltimore. Last, but certainly not least, is their immense

DETROIT LABORATORY.

Here is located the large staff of scientific experts, analytical chemists, physicians, microscopists, botanists, etc., whose controlling influence ramifies to the remotest circumference of the vast business.

When the Ontario Medical Association visited the establishment of Parke, Davis & Co. a year or two ago, its members were particularly impressed with the completeness and magnitude of the bacteriological and pharmacological laboratories. These have since been increased five-fold in capacity and outfit. Here was made the first American diphtheria an-

titoxin that was offered on this side of the Atlantic. Their superior product of this article—the finest in the world—is well worthy of the immense department which was equipped for this special purpose. Provided with all modern paraphernalia, powerful microscopes, huge incubators, sterilizing apparatus, extensive stables and animal laboratories, this branch of enterprise is prepared to keep abreast of the latest discoveries in bacteriological science. They are now engaged in the production of several antitoxins—of diphtheria, tetanus, streptococcus, etc. Their diphtheria antitoxin enjoys the enviable distinction of never having caused a fatality or serious casualty of any kind, and its record in reducing the mortality of this dread disease is unparalleled by any other similar preparation on the market. About one hundred and fifty horses are at the present time undergoing the immunizing treatment for its production. In addition there are several thousand guinea pigs, etc., which are used as control indicators of the potency of the toxins and antitoxins.

A new department is being added in the shape of a vaccine farm. Shortly, Parke, Davis & Co. expects to be able to furnish an unexceptional virus, and the plant and facilities now being installed for this purpose are unsurpassed.

Here is also located the pharmacological laboratory where physiologic assay of the powerful drugs such as Ergot, Strophanthus, Indian Cannabis, etc., is made. Not an ounce of any preparation of these leaves the laboratories of either Walkerville or Detroit without undergoing crucial trial and receiving a positive guarantee of its medicinal activity.

All these departments, bacteriological, physiological and vaccine farm, are under the care of Prof. E. A. Grange, late State Veterinarian of Michigan, whose undoubted ability and experience gives assurance that no expense or care will be spared for the proper observance of hygienic conditions in the stables and laboratories.

The enterprise which this firm has shown in the introduction of new remedies is evidenced by a partial list of its earlier efforts in this direction. Such drugs as the following are now recognized as valuable members of the Materia Medica—Cascara Sagrada, Jamaica Dogwood, Jaborandi, Grindelia, Coca, Kola, Berberis Aquifolium, Corn-silk, Quebracho—yet they were not known to the medical profession until introduced by the preparations of Parke, Davis & Co.

The price list of this house, of which a new edition will be mailed in July or August, comprises thirty distinct *lines* of pharmaceutical preparations and five thousand items. There are one hundred and thirty representatives of the firm travelling over every continent and every clime, in addition to those we have mentioned above as strictly Canadian. Despite the hard times which have so generally prevailed the last few years, Parke, Davis & Co. have been steadily adding to their huge travelling staff, opening new branch houses, building new laboratories by the acre, and essaying every promising line of scientific enterprise. They have committed themselves to an aggressive policy of advancement all along the line, and it remains but to say that their desire to raise pharmacy and therapeutics to higher levels is almost daily receiving the endorsement of the best and most thoughtful men engaged in this practice.

543

# The Canada Lancet.

VOL. XXX.] TORONTO, JULY, 1898. [No. 11.

## ORIGINAL ARTICLES AND COMMUNICATIONS.

### SOME POINTS IN ABDOMINAL SURGERY RELATING TO INTESTINAL OBSTRUCTIONS.

BY H. HOWITT, M.D., M.R.C.S. ENG., GUELPH, ONT.

A paper read before the Trinity Medical College Alumni Association in April, 1898.

To me the time appears amazingly brief to look backwards twenty-five years to the day when I received my degree from the medical department of Trinity College; yet in less than that period what marvellous advances have taken place in every branch of medicine. In regard to surgery, it may truly be said that the history of its modern methods does not carry us far into the past. Nevertheless, in the friendly though intensely earnest race between it and the other divisions of our profession for the alleviation of suffering and the prolongation of life, if it does not actually lead, it is second to none. It has frequently encroached upon the domain of medicine, and threatens further depredations in the future. In no region of the human body has this feature been more marked than in regard to maladies peculiar to the abdominal cavity. To-day the abnormalities which pertain to the abdomen that are considered by us as surgical are numerous.

The departure from the ways of the past, few will deny, has been brought about mainly by the efforts of Lord Lister, who first prepared the means for the present astonishing epoch, not only in abdominal, but also in every department of surgery. The truths made accessible by the genius of this great man have stirred, as it were, the whole structure of medicine to its foundation, and have given it an impulse that will continue to bear fruit for the afflicted long after his dust has returned to the mother earth.

Formerly, even in regard to uncomplicated ovarian cysts, there were many who doubted the advisability of active measures, and any invasion of the peritoneal cavity was seldom undertaken except in the large centres of population and by men of wide experience; many of these, as a rule, put off the operation till death was plainly a near alternative. With the best workers the mortality rate had much to be desired in the line of improvement.

How different to-day! Not only is the ovarian cyst without almost

any distrust as to success early or later in its development at once submitted to the knife for radical cure, but a number of other conditions of more or less grave import of the uterus, uterine appendages, the appendix, the gall-bladder, and of the other organs and structures of the region, have been compelled to surrender many a mortgage on life. The majority of the operations for the serious maladies implied above in the hands of competent men now prove less dangerous than did the most trivial intra-peritoneal before the advent of aseptic methods.

Notwithstanding the state of perfection to which abdominal surgery has through the aid of aseptic methods reached, there are still, in reference to operative work for the relief of intestinal obstruction when distention of the abdomen is a marked factor, three or four points not directly connected with asepsis, but rather with the technique of the operation that are not generally known to the profession. Some writers mention one or more of them, but all have failed, in my opinion, to emphasize their great importance.

In the majority of cases of obstruction the situation of the trouble is low in the bowel, and, consequently, before reverse peristalsis leads to vomiting considerable accumulation of fæcal matter takes place. The arrested fæcal current shortly leads from stasis and other causes to the more or less rapid formation of gas which distends the intestines, and by causing tension of the coats arrests the normal function of the bowel. The tension is the chief factor in producing nature's signal of alarm-pain. When the obstruction is at the sigmoid flexure or low in the descending colon, gas, as a rule, does not form so rapidly, though the amount of fæcal matter present may be large; and in consequence of the gradual development the distention of the abdomen may be simply enormous before the powers of life begin to fag. It is truly wonderful how long life is maintained. To my own knowledge, a middle-aged woman lived almost a month with this condition of affairs, had only a moderate amount of pain and rarely vomited. This is the more remarkable from the fact that her medical attendant gave her half-drachm doses of calomel, large ones of croton oil and mag. sulph., and injections galore. What is really astonishing after this heroic treatment, she had her abdomen opened by an able surgeon, who broke down some adhesions near the cæcum. The wound healed kindly, but no relief followed. Two weeks later he again operated and located an annular stricture in the sigmoid. The anæsthetic—which was chloroform—proved too much for the patient, and she suddenly expired just as the last suture was introduced. But to return to the subject.

The higher the constriction—other things being equal—the more acute the symptoms and the less the amount of abdominal distention.

Besides the position of obstruction in the bowel, some idiosyncrasies of the patient influence very much the rapidity with which the tympanites and other alarming symptoms develop. To a greater extent, probably, does also the method of treatment adopted by the attending physician.

The ordinary causes of obstruction are familiar to all. There is one that is not generally recognized, which, when it exists, the obstruction is generally acute, and the case requires prompt measures in order to

avoid a fatal termination. I refer to acute flexure without either adhesions or inflammation of the adjacent peritoneum. That there is such a form of *surgical* obstruction there can be no reasonable doubt. It may follow shock, intestinal peripheral irritation, or anything that will disturb the normal gastro-intestinal function and favor fermentation.

When flatus is quickly produced it not only enlarges the calibre, but it also increases the length of the portion of gut involved. It thus disturbs to a considerable extent the proper relation of the parts, and leads to circumstances favorable to the formation of a flexure. This is aided very much, too, by the fact that the mesenteric attachment renders that portion of the circumference less yielding to force, which tends to increase the longitudinal axis of the bowel; hence, under these circumstances, flexures more or less acute must occur.

It does not require much thought to perceive how it is possible for an acute angle to be caught in such a manner against the abdominal wall or other resisting part as to favor collapse of the arm nearest the anus and the formation of a valve by the adjacent sides of the intestine. Once formed, the greater the pressure above the more firmly the valve is set. In my opinion, it occurs more frequently in two situations, namely, at the splenic flexure of colon and sigmoid flexure. In septic peritonitis, whether puerperal, post-operative or any other variety, there is frequently a locked condition of the bowels and great abdominal distention, the intra-abdominal tension often being so great as to arrest all peristaltic movements. In such cases we are told that paralysis of the bowel exists, and hence that a fatal termination is inevitable, and certainly the results of surgical procedures in the past strengthen the view. But those who have perused the paper which Mr. C. B. Lockwood read on the 23rd of October, 1894, at a meeting of the Royal Medical and Chirurgical Society of London, on "The Surgical Treatment of Diffuse Septic Peritonitis with Successful Cases," will have at least some doubt in regard to true paralysis causing the arrest of peristalsis—it is force that arrests the movements, not paralysis. I am convinced that paralysis of the bowel is an extremely rare affection, or even complication. To me, in abdominal surgery the term is frequently used in a way that resembles very closely in one respect what torpid liver does in medicine—a good screen behind which we may when pressed hide.

The points to which I desire especially to call attention in regard to the surgery of intestinal obstruction apply more particularly to those cases in which, when the surgeon arrives, the condition of affairs is desperate, but they apply also, though possibly less urgently, to all those in which there is distention. Such patients frequently suffer from the effects of useless efforts to obtain relief by drugs and are generally exhausted by pain, vomiting and the unavoidable arrest of nutrition. They are consequently far from being in a favorable state to bear a prolonged operation. Anything under these circumstances that will permit thorough work being done in the shortest time is worthy of consideration.

The points are as follows:

1st. Completely emptying the stomach by means of syphon tube. The stomach frequently contains a large amount of gas and fluid material.

Its removal by reducing the tension to a sensible extent improves the action of the heart and lungs, hence less danger is run from the effects of the anæsthetic. The annoyance, delay and danger frequently caused by vomiting are effectually avoided. Besides, it also saves time in the steps required to open the peritoneal cavity, for not nearly so much delicate work is necessary in order to prevent the knife or scissors from wounding the bowel.

2nd. The incision should be sufficiently extensive to permit the operator to reach any part of the cavity readily. In the majority of instances it should be in the median line. Those who have had much experience in this special line of work must admit that it is difficult to understand how an operator can, without becoming a criminal, devise a more certain means to prolong the operation, to damage organs and tissues that have already had their normal vitality lowered and to render his chance to save the patient extremely small, than for him to attempt to do through a small incision what is frequently quite difficult to accomplish through a large one. It is far from good surgery to force the fingers or hand first in this then in that direction again and again, over, between and among the crowded coils in vain efforts to locate the trouble, or to waste time in pushing them upwards, downwards, to the left and to the right; but such is the prejudice held by many against a free incision and such their fear of the phantomatic danger from exposure for a reasonable time of the abdominal organs to light and air that they, in a sense, dread the noisy though seldom dangerous thunder, and nurse the electric current which seldom allows an escape.

3rd. Evisceration of the intestines. Experience will soon convince an operator that in these cases it is extremely difficult to pass the hand into the abdomen; that attempts to do so are liable to abrade the peritoneal surface and otherwise injure the delicate structures, and that such efforts are usually utterly futile of good results and merely lead to confusion and waste of time. Notwithstanding what has been said by high authority against exposure of the bowels, I am positive that it is much better under these circumstances not only to make no attempt to prevent protrustion of them, but, on the other hand, to aid the expulsion as quickly as gentleness will permit. The coils should of course be received upon a warm, moist, aseptic towel or gauze, which, when the expulsion is sufficient for the purpose in view, should completely cover them. The temperature of the material used for protection is maintained not by frequent changes, but by constant irrigation of water heated several degrees above the normal heat of the body. When this is arranged expose a portion of a prominent coil, turn the patient somewhat on one side, and at the same time have pressure made over the abdomen with the object of forcing the intestinal contents into the external coils. Then everything is ready for the next step in the operation.

4th. Empty the distended intestines through one or more incisions. A keen knife is the best instrument for this purpose, although some prefer a trochar. The opening should be made opposite the mesenteric attachment. I prefer to make it transverse to the longitudinal axis of the canal, of course avoiding visible vessels, but there is no objection to the

incision running in the longitudinal axis, provided the position on the circumference is correct. The size of the opening should depend on the amount of dilatation of the portion of bowel chosen and the nature of the material to be removed. When the distention is great, an incision sufficient to admit the point of finger becomes little more than a small puncture when the bowel is collapsed, and can be effectually closed with a few sutures. The flow may, when necessary, be aided by gentle pressure, and even by passing the bowel between two fingers in such a manner as to press the contained material towards the cut. It is not always possible to empty the bowel sufficiently through one incision, and when such is the case, the first should be closed before another is made. In my practice it has been found necessary on more than one occasion to open in three different places before satisfactory removal was accomplished. It is advisable not to proceed with operation and close the abdomen so long as tension exists in any portion of the canal. All that should has not been accomplished for our patient if such is done. No matter how well we may do the work in other respects, the chances of recovery are not good if this condition of bowel does not receive special attention. I am convinced that, to a large extent, the hitherto high death rate in these bowel operations is owing to the important matter having been overlooked.

The advantages claimed for this procedure are not by any means confined to the improvement of the field as regards room in reaching and dealing with the cause of obstruction. It removes the cause of impaired circulation in the parts, renders functional activity again possible in the important organs affected, gives the over-distended muscular coat time and opportunity to regain tonicity, and, what is worthy of note, removes from the system offensive effete matter and myriads of pathological germs. In other words, by it we are enabled to improve the supply of volunteers and to aid the older phagocytes in their wonderful warlike attacks on the enemies of life.

There is another point which is not necessarily confined to the cases under discussion, but refers to nearly every instance in which it is advisable to use a drainage tube in abdominal work. It is this : do not place the tube in the lower angle of the wound, or any part of it, but as soon as you have decided that one is advisable, perforate the abdominal wall, making a separate wound merely sufficient to admit your tube immediately over the part where drainage is likely to be serviceable. Endeavor to place the perforation for drainage tube as far as possible from large wound. The adoption of this method permits of more direct drainage, while at the same time it allows the large incision to be completely closed and aseptically sealed. Hence there is less danger from infection, stitch-hole abscess and imperfect union and its undesirable result—hernia.

In 1893, at the annual meeting of the American Association of Obstetricians and Gynecologists, held in Detroit, when discussing the paper of Dr. A. L. Reed on "Management of the Abdominal Incision," it was my fortune, I believe, to direct the attention of the profession to this measure for the first time.

When the preparations have been carefully made to meet each of these steps in the operation, the intestines can be easily collapsed, the obstruction reached and brought into a position favorable for dealing with it in very much less time than is often required by those who adopt other methods to gain even an unsatisfactory conception by touch of the situation of the trouble. I have never known any harm to result from the intestinal cut, which in my practice is always closed with fine silk.

It is my firm conviction that the above procedures have on several occasions enabled me to save life under circumstances impossible by other methods.

Although my practice is not in a large centre of population, it has been my lot to have had three successful operations on infants for intussusception. The eldest of the little patients was only six months of age, and the youngest not three. In these tender subjects the fourth mentioned point was not carried out to the letter; instead of emptying the loaded ileum by means of an enterotomy, the contents were gently forced, after reduction of the invagination, into the empty colon, whence by natural means they were in each instance shortly expelled.

Besides the above-mentioned, I have within the last five years resorted to the measures on seven different occasions. The ages of the patients varied from sixteen to sixty-seven years. In six of these the operation was for intestinal obstruction, and the seventh for general suppurative peritonitis arising from a perforated and partially gangrenous appendix. Although the symptoms were in each case severe, all recovered but the last mentioned. Four of the operations were done at night with no better light than can be obtained from the ordinary coal-oil lamp used in the country, and in the unsanitary environment of the general room or kitchen.

Time will not allow me to report more than two of the cases at present, but I trust on some future occasion to be able to record the others.

The first given below is a good illustration of complete obstruction without a constricting band volvulus, intussusception, tumor, internal hernia, adhesions, or any other of the usual causes, but due to an acute flexure with great distention of the bowel above it. By it we may understand how, in even desperate cases, recovery has occasionally followed in the past the unsurgical procedure of plunging a trocar into the abdomen.

### CASE I.

On the 31st August, 1893, a medical man requested me to see in consultation a farmer 38 years of age, who, eight days previously, while stepping from a mow to a load of grain had slipped and fallen between them to the floor. He was stunned and had to be carried to the house. The doctor saw him shortly after the accident, when he complained of severe pain in left shoulder and hip.

On the following day he felt much better, yet the pains in shoulder and hip were still troublesome. Any attempt to use the left arm aggravated the pain in shoulder. On the whole, to his medical attendant the daily improvement was satisfactory until the end of the

fifth day, when a rigor occurred, followed by rise of temperature, quickened and feeble pulse, much gastric disturbance and thirst. Then severe colicky pains and tympanites set in; the latter soon became a marked feature of the attack; but there was no excessive vomiting then nor afterwards. The bowels, which up to the day before had been regular, now refused to respond, though several active means were employed to procure a motion.

By the seventh day there were good reasons for alarm. Except the characteristic vomiting all the symptoms of acute obstruction were present, and there was considerable tendency to collapse.

When I saw him he was, in my opinion, almost as near death as it is possible for one to be. The pulse, which was hardly perceptible at wrist, varied from 160 to 170; temperature subnormal; surface of body moistened with a cold, clammy sweat; respiration rapid and superficial. The distention of the abdomen was simply immense. I never before nor since saw anything like it. So far as the abdomen was concerned the drum percussion note was universal, and on the left side extended up the chest as high as the upper border of the fourth rib. The apex of heart was displaced upwards so that it beat against the third intercostal space. On the right side the liver was pushed up sufficiently to give a tymphanite note over lower inch or more of ribs. The rectum was empty, and neither flatus nor fæcal matter had passed for three days.

Including myself there were four medical men present at the consultation. We all agreed that we had to deal with bowel obstruction, but differed from one another as to the cause of it. On account of the very unusual condition of left side of chest, and especially since it followed an injury, my diagnostication was hernia through the diaphragm.

One of the medical men present was a brother of the patient, who realizing there was no other possible escape, strongly urged an operation. Owing to the apparently moribund state of patient, and the unfavorable environment connected with the only room available for the operation, I at first demurred, but finally consented to perform it.

When the patient was fully under the anæsthetic and we were arranging the protective towels, it was fortunately discovered that his left shoulder joint was dislocated. The dislocation was easily reduced.

A median incision was then made extending from near the ensiform cartilage to umbilicus. When the peritoneal cavity was opened a portion of what we at first thought was part of the stomach dilated, but which proved to be the transverse colon, presented. The bowel was dilated to an enormous size. We now knew the trouble was situated between the part of colon in view and the rectum. An attempt was made to pull it out through the incision in order to relieve tension and thus facilitate our work, but it would not come; nor could the hand with justifiable force enter the cavity.

The presenting part was incised with a knife, and almost odorless gas escaped with force, and then partial evisceration of the transverse colon was accomplished. The tension being lessened the hand readily entered. On reaching the descending colon I found it collapsed; tracing it upwards my hand was arrested by a distended coil part behind which the empty

portion passed and was tightly pressed between it and the parietal wall. Considerable pressure failed to make any impression on the offending coil, so the hand was forced over it with a view to follow its course to opening. It took a zigzag course with several acute angles. In the course the hand must have reached a point as high as the fourth rib, and the impulse of the heart was plainly felt through the diaphragm. At last a part was reached where pressure easily forced the gaseous contents backwards towards the place of escape. Then by retracing my steps, portion after portion was emptied till the obstruction was overcome and gas entered descending colon. The bowel cut was not closed till the colon was completely empty. The bowel incision was at first large enough to admit my finger, but the contraction which followed the escape of contents reduced it very much, and only three sutures were required to seal it.

The abdominal incision was closed without drainage. The operation lasted a little over half an hour. When we consider the low state of the patient before we commenced, he made an excellent rally. That evening he felt much relieved, especially regarding pain and dyspnœa. The pulse remained over 140 for twenty-four hours, and then gradually fell. Flatus passed early in the night, and the bowels responded readily to an enema on the second day. He made an excellent recovery, and is to-day in the enjoyment of health and vigor.

### CASE II.

On the 30th March, 1896, Dr. McPhaden, of Mount Forest, requested me to see a young man, 18 years of age, the son of a farmer of that neighborhood. The doctor, another medical man of the town, whose name at the present moment has escaped my memory, and myself, drove out, reaching the place about 2 a.m. A less desirable abode for operative work could not easily be found—*a mere hovel.*

The young man had all the symptoms common in intestinal obstruction. Though active and judicious measures had been taken, no movement of the bowels had occurred for six days. To be brief, the terrible suffering of the patient, the great abdominal distention, the complete absence of peristaltic movements, the rapid pulse and disturbed temperature, and, in fact, everything connected with the case, indicated that nature could not hold out much longer. The state of his body, garments, bed-clothes, and things in general about the cabin, plainly said that soap and water were practically unknown there.

After the examination I frankly told the father, who was the only member of the family present, that in my opinion there was not more than one chance in a thousand of saving the boy by an operation. His reply was: "Operate then, for it is plain there is no other chance."

The space was so cramped that with difficulty we managed to arrange the table so as to allow standing room on opposite sides of it, and the floor so uneven that one had to move carefully to avoid being tripped.

When the patient was prepared and anæsthetised, the father held an indifferent coal-oil lamp close to the field, in order to give us sufficient light to proceed. The incision extended from over two inches above the

umbilicus to near the pubes. Hardly a sponge was required, the tension of abdominal wall being so great as to almost arrest circulation in it. As many as possible of the distended coils were pulled out and protected with gauze. On making an incision into the bowel the only wash-basin connected with the establishment was quickly filled with offensive, liquid, fæcal matter; and then an ordinary milk pan was brought into use. Three intestinal cuts in all were made. After the contents were removed we had no trouble in exploring the interior of abdomen and finding the cause of obstruction. It was a cord-like band the thickness of a number six catheter, which crossed and tightly compressed the ileum close to the cæcum. The band was cut between two ligatures. The condition of our patient and other circumstances, not excluding the hot stove close to one's back, were not propitious for a critical examination of its origin.

In less than an hour the patient was back in his bed. Under the skilful treatment of Dr. McPhaden he made an excellent recovery.

It is quite clear to me that the knowledge we had pertaining to the measures referred to in this paper enabled us to save the life of the young man, and that no other method would have attained the same result.

## ONTARIO MEDICAL ASSOCIATION.

*(President's Address.)*

GENTLEMEN:—When, at our annual gathering last year, I was made a recipient of the highest gift at the disposal of the Ontario Medical Association, my uppermost feelings were those of surprise, thankfulness and timidity. Many there were who, by right of seniority and veteran labors, had stronger claims on your consideration; any one of whom would have presided over this noble assemblage with all the dignity and ability that the occasion demands: therefore I the more keenly appreciate the expression of your kindly feeling and generosity. The undertaking, on my part, was fraught with much that would naturally disturb one's ordinary peace of mind. The infancy, childhood and puberty of this association (this is but its 18th birthday) have been intimately linked with a brilliant list of eminent men who, as chief officers, have so largely contributed to its growth and effectiveness—men who have created ideals the most impressive in character, and in whose onward footprints it is not easy to tread without faltering. With a consciousness of the responsibility resting upon me and a somewhat imperfect estimate of my shortcomings, I have gathered around the standard various committees possessing all the qualifications necessary to constitute this, our annual meeting, a step forward in the march of Canadian medical science; and I would take this opportunity of expressing my thanks publicly for the preparatory work which they have so gladly, assiduously and disinterestedly performed. It has been for them no sinecure: abundant evidence of this will be found in the comprehensive programme now laid before you, the carrying out of which, I trust, will prove, in the highest sense, both entertaining and instructive.

On behalf of the Association I extend to our guests from afar the right

hand of cordiality and good-fellowship; and, having again and again witnessed the proverbial hospitality of that branch of the profession resident in Toronto, I have full confidence that those members who have come from the many outlying districts of the Province will feel perfectly at home; indeed it will not be optional with them, but rather a matter of sheer compulsion, if I know aright the instincts that prompt the gentlemen who constitute the committee of entertainment.

In order that such a meeting as this should fulfil its purpose it is imperative that each contribute his share in elucidating the various topics that may be presented. Even at the risk of verging on the sacrilegious, I would say:

"Let not fitness make you linger
Nor of fitness fondly dream".

Modesty should be the handmaid of true ability, not its tyrant; prominence of location is not always a reliable criterion of intense personality or mental cultivation; the city doctor, to be sure, derives benefit from frequent converse with his fellows; but his solitary brother from the cross-roads has at least one advantage over him in that his environment, perforce, evokes the cultivation of self-reliance and the faculty of keen observation. I hope that none will hesitate; we are here for the rapid interchange of ideas that will stimulate afresh our enthusiasm and perseverance.

I scarcely think it needful to exhort the home members on this line, a very large majority of whom belong to the local societies; and, as a natural consequence, a *rara avis* amongst them would he be who required snipping of the lingual frænum. Let discussion be prompt and spirited, even approaching the line of disputation, if you will; we are assembled to elicit truth and relinquish error; and, although good-natured blows may mar the symmetry of some airy castle, its builder will not take umbrage; for, locked in the embrace of a common brotherhood, our ultimate object is not self-aggrandisement but the attainment of knowledge for the alleviation of suffering and the good of mankind.

This brings me to the subject to which, for a few minutes, I wish to direct your attention, viz:—the present relationship of the profession to the public at large; and, as a pre-eminent factor thereof, the standing of the profession itself, viewed, as much as in me lies, from an impartial standpoint.

Not self-constituted as such, but in the very nature of things, he who enters upon a medical career is compelled by the peculiarities of his calling to recognize himself as a guardian of the commonweal, prompted by instincts the loftiest and motives superior to mere selfishness or ardent longings for the accumulation of wealth. The people claim, and rightly so, the devotion of his unflagging energy to the physical welfare of those to whose necessities he is called upon to minister. Not this alone, but his avocation stands upon a still higher plane than the relationship to the individual; the world at large is the scientific physician's parish, and its defects the supreme object of his best thought; never satisfied with what has already been accomplished by others, his leisure moments are occu-

pied in striving to solve the problems of nature; often unsuccessful, but never without that reward which invariably follows the pursuit of the true and abiding. A Jenner, a Simpson, a Koch or a Lister once in a while towers aloft as some snow-capped Alp in the light of the rising sun, invested with all the majesty of a noble creation. These intellectual giants few can ever hope to emulate; but, from the history of their life work, the lowliest and most obscure may draw such inspiration as glorifies labor with high ideals and fills the heart with burning desire for the good of others.

Community of interest so intimately links the profession and the laity that it seems not unbefitting for me to dwell for a little while on some features of human life—family, social and educational—as we see it in this Province of Ontario; and, in so doing, if I should indulge in a little criticism, do not for a moment imagine that I am posing as the stalwart exponent of some great reformation. Much that I shall say has already been better said and written, my object being repetition for the sake of added testimony and emphasis.

During the past two or three generations there has been in progress, amongst our people, a certain kind of questionable evolution—intellectual development somewhat out of proportion with physical force and endurance. Our grand-parents were a hardy stock, well furnished physically for coping with life's difficulties. In those early days of migration from the old lands Canada was to them a far-off, unknown country clad in its primeval forests; and, to reach its shores, they had to undertake an ocean voyage in sailing vessels often badly equipped for the stormy journey. The weak and puny dared not venture; consequently, by natural selection, Ontario was peopled with a sturdy race of pioneers blessed with great physiques, living in a primitive natural fashion and free from the burden of too much scholastic training. *Pari passu* with the financial advancement of the country a gradual change has been going on in these respects; let us inquire if it is for the better.

Herbert Spencer never said a truer word than when he affirmed that "first attention should be devoted to the development of the body, and that profound erudition should be looked upon, in some senses, as of secondary importance." True education can be nothing more nor less than that which prepares mentally and physically for the oncoming struggle. It is fortunate for the race that young men naturally choose, for their helpmates, rollicking buxom damsels in preference to the sunken-eyed, sallow-faced slaves of knowledge. I do not, for a moment, seek to enter a protest against the higher education of woman; mental culture is, for her, a diadem of beauty; but too often a possession acquired at tremendous cost. None but the strongest should, in my opinion, enter on a career of study so exhaustive and exacting as the curricula of our universities set down. A head full of knowledge and a worn-out nervous system are but poor qualifications for the coming mothers of Canada's sons. We as a people are proud of our Ontario school system; that it is largely taken as a model by the Provinces of Quebec, Manitoba and British Columbia and the North-West Territories and has been highly commended by the foremost educationists of the United States, amongst them the

Commissioner of Education at Washington, is a tribute to the wisdom and foresight of those who have placed able administrators at the head of this department of public affairs; but, like all things of human origin, we must not look for perfection in its details. From the physician's standpoint I humbly submit that it is handicapped with a defect of such magnitude as to alarm him who weighs well the possibilities of the future. The standards of to-day reach so far above those of a couple of generations back that evolution along the line appears to have advanced at a galloping rate. Is it not time to tighten the reins? Are not children sent to school at far too early an age to stand the fatigue of book-work? The first seven or eight years of life should be free from care and worry, and devoted exclusively to such pleasurable pursuits as shall conduce, in the highest degree, to the development of bone and muscle; for, during this period, the nervous system will have plenty to do in automatic preparation of itself for the subsequent performance of its special duties. Parents and teacher leap for joy when a five-year-old manifests his precociousness; and the nervous little monster is held up by his attenuated arms in the sight of his phlegmatic or sanguine classmates as a paragon of perfection angelic to behold; when he should be making mudpies and wearing out his pantaloons in the physical activities of childhood.

Unless the vision be tested too much with small objects, no one can take exception to the work of the Kindergarten; for its essence is agreeable discipline, the training of the faculty of observation and the directing of memory in preparatory channels without forcing its exercise; in a word, it is child's play made systematic.

In the ordinary schools, home-work, as a rule, is made a burden too heavy to be borne with safety—when the pupil has finished the task, there remains insufficient time for rest and recreation, and it is no unusual thing to find the problems of the evening in advance of what already has been thoroughly taught. It would appear, at times, as though the schoolroom were transformed into a hall of inquisition for the purpose of discovering how much the pupil has failed in his home study, instead of being the place for intelligent education in harmony with the order of development of the mental faculties.

It is to be hoped that, ere long, in the advanced classes of the Collegiate Institutes, as well as in our Universities, competitive examinations will cease to be so stiff that victorious combatants emerge from the conflict proud of their conquests, but, as likely as not, to fall into the hands of the doctor for repairs—sometimes too late, for often the foundation has already been laid for a neurasthenic superstructure. I am not speaking theoretically; but am setting forth those things with which, professionally, I have had to deal.

Let us propound to ourselves the question—why is insanity, especially that of adolescence, together with kindred forms of nervous disorders, on the increase?—and, having solved it to our satisfaction, let us give the community the benefit of the investigation. The emulation and everlasting strife for a place in the front ranks of society, financially and socially, constitute, doubtless, a potent factor; but let us not forget that

this restless activity is often born of the habits engendered long prior to manhood.

Functional excess is always at the expense of defective reparative power. An extraordinary organ is the brain—a tired muscle refuses to work; an overwrought mind declines to take repose—the ploughman, after having "homeward plodded his weary way," sinks into sweetest slumber, while the over-taxed student is, too often, the victim of insomnia with all its hideous reveries.

Someone has well said that the bulwarks of a nation consist not in strong fortresses erected on its boundaries, nor does its stability depend upon mighty navies that traverse every sea, but its security lies in the keeping of intelligent men and women who have sound and rugged bodies ever ready to repel the inroads of disease.

It is a matter for congratulatory reference that governmental assistance, municipal aid and private contributions, prompted by appeals from the profession, and under its guidance, have dotted the land with hospitals for the reception of the poor and needy as well as for the convenience of the opulent, and that these institutions are accomplishing a great work in the interest of all classes; but it is to be deplored that, under the guise of poverty, daily abuse is made of the privileges that philanthropic motives have provided for the deserving poor.

Here the attending physicians discharge responsible and onerous duties without hope or expectation of reward, other than that which might be expressed in Portia's words paraphrased—"Charity is twice blessed, it blesses him who gives and him who receives;" but gratuitous services to those who are quite able to remunerate are not a blessing but a pauperizing curse to the recipients.

It is stated by no less an authority than the *Medical Record* that the number of persons who received free medical and surgical relief at the hospitals and dispensaries of New York during the past year amounted to 49.7 per cent. of the entire population, and that fully 70 per cent. of this number were quite able to pay a medical practitioner at least a moderate sum for his services; and no member of a hospital staff in Ontario will deny the fact that the evil exists here. How this difficulty is to be met it is hard to determine; but some effectual check should be placed on a custom so fraudulent in character. As a rule, before admittance is granted to a free ward, a certificate is required from a clergyman or other reliable citizen to the effect that the case is one deserving charitable consideration; and, it seems to me that, were such a law extended so as to include those seeking out-door advice or attendance, the evil would be much mitigated. It is, of course, understood that exceptions would be made in cases of emergency and amongst those who are utter strangers in the municipality. I would suggest that a representative committee be appointed, whose duty would be to make full inquiry as to the best method of minimizing these impositions, and with instructions to report to this Association at its next annual meeting.

My immediate predecessor denounced in forceful language the universal existence of lodge attendance; I can only emphasize the remarks that fell from his lips. To contract work, on the ground of principle, none

could fairly take serious exception, provided always that the contract price is fully commensurate with the value of the work done; but to bring about such a condition of things will be accomplished only when the dignity of the profession rises superior to that which is accounted merely expedient; for, so long as medical men are willing to accept the beggarly pittance of one hundred and fifty dollars a year, or less, for looking after the health of a hundred members of some lodge or other, with the hope of securing thereby professional entree into their family circles, just so long will this financial snap prove to be one of the strongest drawing-cards in the hands of fraternal societies.

I do not feel free to denounce the individual transgressor to the lowest depths—the custom is everywhere; and often contrary to his nature, for self-protection he is forced into this objectionable line of work; still, after all, it is at best the same old lame excuse, "If I don't do it, others will." With all my heart and soul I stigmatize the system as a rotten plank in the platform of gentlemanly dignity and independence.

We have, in this country of ours, an array of medical men and a galaxy of schools of medicine and surgery that would be a credit to any land under the sun; for all that, one is forced to lament the fact that, in a certain sense, their light may be hidden under a bushel. I refer particularly to the non-production of home-made medical literature. Thirty or forty years ago our special knowledge was derived from the writings of men in the mother-land; since that time our cousins across the line have been forging ahead so rapidly, that to-day, in any medical library are to be found almost as many volumes of their production as those that come across the Atlantic; and amongst the best of these are those whose authors were formerly Canadian citizens, but who, in search after larger spheres of activity, have gone over to the Republic.

We have a few noted exceptions, workers who have had the courage to venture out on this field of labor, and their writings have met with much favor and appreciation. There are many others who have been richly endowed by Nature and possess the knowledge requisite for the purpose; but a single obstacle in the way, lack of self-confidence, has hitherto deterred them. Personally I hope to see the day when our students will have in their hands first-class books emanating from those of the profession in Canada who have the genius of imparting their thoughts in a form alike striking and attractive.

Should this company formally express its convictions as a stimulus, I cannot believe that I am allured by an *ignis-fatuus* when I predict that, ere we meet again in happy conclave, we shall see further evidence that the hardy sons of the north are determined that our country shall stand side by side with those that have given to the world medical works worthy of closest perusal, accepted as standards and a credit to the authors.

A few years ago, for reasons best known to themselves, the members of the Ontario Cabinet indirectly assumed the responsibility of annulling that clause of the Medical Act which made provision for the framing of a tariff in each electoral district; such scale of charges to be authoritative after endorsation by the Council of the College of Physicians and Surgeons.

I was given to understand at the time that Sir Oliver Mowat expressed the opinion that the system was objectionable owing to the lack of uniformity amongst these various tariffs, emanating, as they did, from as many Council constituences. In my humble opinion, on close investigation, this could not be held as a valid reason. The urban and pioneer settlements of the Province are vastly different so far as the financial resources of the people are concerned; a uniform tariff would either press too heavily on some, or be inadequate for the circumstances of others; and, therefore, could not be as fair as those which were in existence.

We all know that, during that session of the House, there was not a little influence exerted by a certain clique, or section, of the Legislature which promulgated the doctrine of extreme radicalism, and was largely founded on the principles of iconoclasm. A prominent feature of its policy was obnoxious opposition to all kinds of class legislation, and the doctor was labeled a parasite in the community. Zeal, not born of knowledge, used all available means to secure destruction of the tariff. How much their efforts conduced to the ultimate result I do not know; but speedily the tariff became a thing of the past, and, as a consequence, the judges of the land are left without any recognized guide in estimating the value of services rendered for which compensation might be sought in the courts.

A petition to the Government, asking for redress of this grievance, and directing attention to other matters of moment, was circulated last year amongst the profession by order of the Medical Council. It obtained nearly two thousand signatures, and was presented in due form; but the understanding given to the Committee of Legislation was that the complexion of the House was such as to render, for the present, any amendment to the Medical Act inexpedient.

I have always been, and am to-day, a consistent supporter of our Administration; therefore it will, I trust, be conceded that I speak from an unprejudiced standpoint; but I must say that we, as a profession, cannot afford to be deprived of that which was our honestly acquired possession, a privilege the abuse of which has rarely been assailed and never proven. Let this Association not forget that it wields a tremendous influence politically. I appeal to its members, as well as to those of the profession who have not yet entered its ranks, to account it their individual and combined duty to lay before their representatives in Parliament the exact facts of the case, in order to have a speedy restoration of their rights.

One word more on the much-discussed question of inter-provincial registration and I am done; and, in so doing, if I introduce aphorisms afflicted with talipes, give credit at least for the effort, because Mark Twain says: "It is easier to be good than to make a maxim."

1. Our existing system is egregious and the natural outcome of that part of the Act of Confederation which placed the control of education in the hands of the Provinces.

2. Vast fields in the Great North-West are being rapidly developed and require medical federation.

3. In the older provinces it would relieve plethora.

4. Recent licentiates, most of all, would appreciate its broadness.

5. On careful examination, I find our standard the highest, both as to preliminary training and the prescribed course of scientific study.

6. To await theirs to equal ours would postpone indefinitely.

7. Reasonable concessions are neither undignified nor disastrous.

8. Our co-workers could strive to meet us part way.

9. Mutual sentiments, then matrimony.

10. Unswerving loyalty to the genius of our calling and abiding confidence in Canada's future must, before long, remove every barrier, fancied or real, that stands in the way of its happy consummation.

11. A great empire, its greatest colony, one language, and a united profession.

In conclusion, let me again express my thanks, and wish you all abundant prosperity, during the coming year, in your various centres of usefulness.

---

## THE PANCREAS AND OTHER SO-CALLED SWEETBREADS.

Dr. Parry, in the *British Medical Journal*, hints at a possible danger to health in the use of thyroid and thymus glands, that may be sold by butchers under the name of sweetbreads. He has made some investigation of the subject and finds that there is a confusion of terms, intentional or otherwise, in the minds of the sellers of meat. He says: "In talking to a butcher I was surprised to hear him say that there were three sweetbreads in an animal. I asked him where they were situated, and he told me at the root of the neck, in the cavity of the chest, and in the belly of the animal. I questioned him more closely and discovered that his three sweetbreads corresponded respectively to 1, the thyroid gland; 2, the thymus gland; and 3, the pancreas. To make quite sure that no mistake had been made, I watched him, a day or two after, kill and cut up a bullock. The thyroid gland in this animal is situated low down at the root of the neck, over the trachea. The thymus (which he told me was bigger in the calf than in the bullock) is placed in a somewhat similar position to where it is in man; while the pancreas, (the most important organ) he regarded as the least significant, and told me it was 'given in with the liver.' He told me, moreover, that if he were asked for calf's sweetbread he would always give (what we call) the thyroid and thymus glands. I have been informed that all butchers do the same thing, though I cannot vouch for the accuracy of this statement. At any rate, it seems to me to be right for every physician to be on his guard when ordering 'sweetbreads' for his patients that the pancreas be provided, and not these other glands. An undercooked calf's thyroid gland being repeatedly given in the place of a real 'sweetbread' might, as we know, produce untold mischief in a patient, as well as perplex the mind of the prescribing practitioner in a peculiar and undeserved manner.

---

EGBERT'S HYGIENE AND SANITATION.—A Manual of Hygiene and Sanitation, by Seneca Egbert, A.M., M.D., Professor of Hygiene in the Medico-Chirurgical College of Philadelphia. In one handsome 12 mo. volume of 360 pages, with 63 engravings. Cloth, $2.25 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

---

In December, 18, 1897, issue of *Journ. Amer. Med. Assoc.*, Dr. Gallant discussed the Van Arsdale triangular splint in fracture of the femur of children under six years old.

"The Van Arsdale triangular splint is made of thick straw or binder's board, as follows: Measure the length of the uninjured thigh from the middle of the groin to the end of the femur. Outline upon the cardboard a figure resembling two spades, as seen on playing cards, united at their points, the length of each of the four sections to be equal to the length of the child's thigh, the flayed portions to equal at the widest point the length of the thigh. Cut the outlined figure from the sheet of cardboard. Moisten this on one side, and fold at the junction of the ends of the spades and the narrow ends where they joint the enlarged part of the spade. These ends are then capped over each other and bound together, thus forming a triangle. Cover the abdomen and thigh with absorbent cotton held in place by a gauze bandage. Secure the splint by muslin bandages carried through the splint around body, then around thigh. To prevent lateral motion take fig. 8 turns at the upper angle around body and at lower angle around knee. Encircle the body and thigh with starch or crinoline bandages to fix the splint and prevent removal."

He claims the following advantages for this method:

1. Overlapping is prevented by the fixed position of the thigh, relaxing the muscles.

2. The fragments are held in perfect opposition, owing to the nice adjustment of the splint to the thigh, and complete immobilization in whatever position the child may be in.

3. Frequent readjusting is unnecessary, as the dressing is not soiled by the excretions, nor are chafing and dermatitis met with.

4. Complications due to confinement in the dorsal decubitus, such as hydrostatic pneumonia and vulvo-vaginitis, are avoided and the liability to concurring disease prevented.

5. Loss of flesh and strength does not occur, as the child is well and happy; it can nurse at the breast, sit on a chair, play on the floor, even learns to crawl about, sleep on either side; in fact, leads a perfectly natural life, with one exception—inability to walk.

6. Under these conditions we are justified in expecting rapid, firm consolidation in three weeks without shortening, and non-union will be rarely, if ever, met with.

7. For older children and adults the triangle can be strengthened by the use of plaster of Paris, the flexed position of the limb being the best for maintaining the fragments in apposition, the most comfortable for sitting or lying and other necessary functions, and the most convenient for getting about on crutches.

---

F. T. Paul, F.R.C.S., Surgeon to the Royal Infirmary, Liverpool, in a recent article suggests a new method of gastro-enterostomy (*Brit. Med. Jour.*) The plan is as follows: The bowel and stomach having been exposed, a longitudinal incision is made in the former—for about two inches in the human subject—through the peritoneal and muscular coats only. These are reflected with a small, curved, blunt dissector over an oval area, having a diameter of about 1 inch in the centre. The exposed submucosa is then rubbed with a stick of zinc-chloride, say half-a-dozen times, being well dried between each application, when it assumes a grey dead look. The bowel is now wrapped in a piece of moist absorbent wool and laid on one side, whilst the stomach is dealt with in an almost similar way. In preparing the stomach for the anastomosis, instead of making a linear incision, an oval patch of musculo-peritoneal coat is excised; the muscular coat being so much thicker in this organ, it is rather in the way if only reflected, and what is of more importance is that the loss of substance helps to prevent subsequent contraction of the opening. Both the wounds having been duly cauterised, they are brought together, and a continuous suture of the finest green gut or silk is run round the edges, as shown in the illustration—not, of course, penetrating the mucous membrane, but picking up as far as possible the tough submucous coat. Finally, a few Lembert or Halsted sutures are generally desirable, especially in anterior gastro-enterostomy.

The result of this operation in dogs—it has not been done in the human subject—is that the mucous and submucous coats slough and entirely disappear between twenty-four and forty-eight hours after the operation, and good firm union seems to take place with great rapidity. The complete removal of the slough might be a somewhat slower process in the average human patient; but probably an anastomosis would be effected within forty-eight hours—which is practically as soon as food could be digested, and quite early enough having regard to the proper adhesion of the external coats.

The features of this operation which it is hoped may be reckoned as advantages are:

1. The effect is one of pure traumatism. The viscera not being opened, all risk from such sources is avoided.

2. No foreign body is used.

3. The time occupied is less than for a suture operation, though more than for Murphy's.

4. The anastomosis resulting from loss of tissue should be more durable than in the majority of methods.

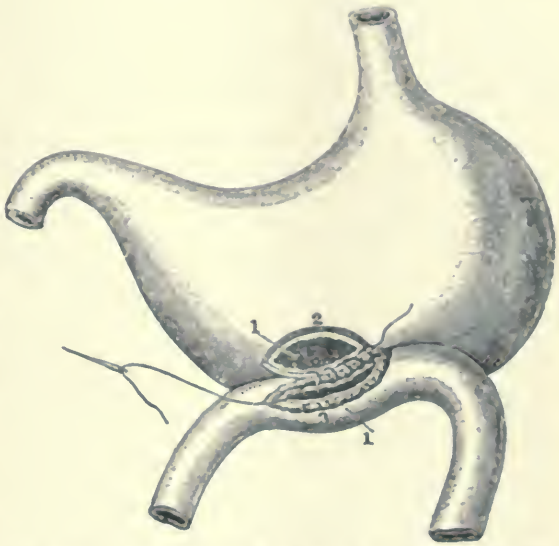
In performing the operation experimentally upon animals I have had the kind and valuable assistance of Professor Sherrington, who has personally helped me on each occasion, for which I feel very much indebted to him.

The chief points to which our attention has been directed were to ascertain :

1. The best chemical for causing necrosis of the mucous and submucous coats.

2. The interval between the operation and the breaking-down of the slough.

3. The character of the union.




Anterior gastro-enterostomy by a new method. 1. The eschar produced by chloride of zinc. 2. Wound in the stomach made by excising a portion of the outer coats. 3. Wound in the intestine made by incising and rolling back the outer coats. The commencement of the continuous suture is shown.

4. The efficiency and durability of the anastomosis.

Eight animals were operated on, and the experiments have been continuously progressing from November 2nd to the present time.

In regard to the general result the most noticeable feature has been the complete absence of shock in every case in which gastro-enterostomy alone was done. In estimating the severity of the operation, I am able to compare the effect of this method with that of several previous gastro-enterostomies in dogs, in which the viscera were opened, and I attribute the absence of shock, and, indeed, of any appreciable pain or disturbance, to the fact that nothing of a dangerous nature was done. The viscera were not opened, and therefore the local peritoneal reaction was purely plastic and aseptic, and was not accompanied by that sensation of pain and insecurity which is present when the localised peritonitis is associated with septic as well as traumatic influences. Professor Sherrington has had a much larger experience of the effect of operations upon animals than I have, and he quite endorses this view.

Only three chemicals were tried, as in the first instance I was limited to five experiments, though the limit was subsequently withdrawn. Strong nitric acid well applied failed to produce an anastomosis. At the end of a fortnight firm adhesions were present over the area operated on, but no opening at all. Chronic acid was more successful, but I thought not quite so efficient as zinc chloride, which has now been used seven times on six animals without once failing. Several other escharotics were thought of, but as the zinc chloride seemed to answer so well they were not tested.

The interval between the operation and the separation of the slough has not been quite definitely fixed. At 16 hours it was on the point of giving way. At 48 hours it was entirely removed, and strong union was present all round the opening. There were no other cases bearing upon this point.

The character of the union was very good in all the cases. The continuous suture was thoroughly embedded in a firm adhesion of plastic lymph which left nothing to be desired on the score of safety.

It has been difficult to decide as to the permanent efficiency of the anastomosis in dogs. In one the duodenum was divided, and gastro-enterostomy performed at the same sitting. The animal died at the end of two days from gangrene of the distal end of the duodenum, due presumably to division of the gastro-duodenal artery. Another in which the duodenum was greatly narrowed thrived well, but it seemed probable that some of the gastric contents continued to pass by the natural way, though the constriction of the bowel was sufficient to have produced dilatation above it. In a third, contraction of the pylorus was effected by destruction of the mucous membrane by zinc chloride, gastro-enterostomy being delayed until symptoms of pyloric obstruction were marked. After a few days' relief the severity of the symptoms increased, and the operation was a failure. At death a fortnight later the anastomosis was present, and would admit a little finger. It had either been made too late, or too small, or in a bad position, for it was high up near the lesser curvature towards the cardiac end. Probably all three conditions contributed to bring about failure. In this case the external coats of the stomach were incised only, and not cut out as I would now recommend, and the original incision itself was too small. Probably to get an orifice half an inch in diameter after complete recovery has taken place, one must operate on an area of twice that extent, and the loss of tissue should involve all the coats of the stomach if subsequent contraction is to be safely guarded against.

There was no evidence of regurgitation of intestinal contents into the stomach in any case. All the gastro-enterostomies were anterior, and in my limited experience in dogs and men this has not occurred in the anterior operation, though it did in one or two cases of the posterior operation in dogs which I performed in 1892.

In conclusion, I may say that I feel satisfied as to the safety of the operation I have proposed, and I believe there is a fair prospect that it will prove successful in effecting a satisfactory lateral anastomosis. The result of Murphy's operation in exhausted patients is sufficiently discouraging, in my judgment, to exclude it in this class of cases, though it is very successful under more favorable circumstances. I shall therefore feel justified in employing this method for my next gastro-enterostomy.

---

## GOOD RESULTS FOLLOWING URETHRAL RESECTION.

Fuller (*Med. News*) describes two cases, in each of which a most extensive resection of the urethra was performed. The operation was ap-

parently first suggested by Konig, in 1882, his case being a traumatic stricture of the membranous portion. The free edges of the urethra were dissected up and brought into apposition by suture. Konig supposed that the success of the operation lay in the healing, by primary union, of these cut edges. The operation was, therefore, held to be applicable only to such cases of stricture of the membranous urethra as involved but a short portion of its length, and as would consequently admit of suture of the cut edges.

Acting on this idea, Wolfler, a few years later, finding that he had resected too great a length of the urethra for suture, grafted in the necessary amount of mucous membrane from a guinea-pig. He recorded a good result.

Many satisfactory cases of grafting were given by different observers; but the taking of the graft has been only inferred. Indeed, it is difficult to see how the graft can be exactly sutured so as to make a roof for the posterior part of the resected urethra. As equally favorable results were soon obtained, without the aid of either primary suture or graft, the objection to the excision of large strictures became void. Finally, in 1892, Guyon, and others of the French urethral surgeons, seeing no reason why resection should be confined to traumatic stricture, recommended the application of the method to contractile and rebellious strictures of gonorrhœl origin.

The usual proceeding advocated by the French authors is, after excising the stricture and surrounding cicatrical tissue, to induce a *sonde a demeure*, and then to unite the perineal or penile tissues by several tiers of suture over this. The advantage of the *sonde a demeure*, after extensive section of the deep urethra, is that it acts as a splint, steadying the cut urethral ends, and affording a firm, cylindrical body, about which the perineal tissues may be moulded, so that in healing they may be made to conform, as nearly as may be, to the shape of the new urethra. The disadvantage of the instrument is that it cannot be removed if its presence in the bladder causes tenesmus. If vesical tenesmus be excited, the urinary infiltration into and suppuration of the perineal tissues may result. If the sound is once removed to rest the bladder, it cannot be replaced, and the only thing to do, in such event, is to re-open the perineal wound.

Seeing the disadvantage of this mode of treatment, the author, in his two cases, divides the deepest part of the membranous urethra and the most posterior perineal structures, and passes a large-sized drainage tube into the bladder by this route. Then, along the urethra, he passes a soft catheter, extending to the big perineal tube, and about it sutures the perineal structures. This urethral tube is kept *in situ* for a week or ten days. The big vesical tube can be withdrawn and replaced, if necessary, without disturbing the urethral tube.

In the first case reported by the author, the scrotum and perineum was one mass of indurated tissue, riddled with fistulæ. Through one of these openings a filiform bougie was passed into the bladder as a landmark. Then a long, straight median incision was made, extending from the penile urethra, in front of the scrotum, back to and partially includ-

ing the anal sphincter. The cut split the scrotum, a testicle lying on either side of it. The entire bulbous urethra, an inch of the penile portion anterior to the bulb, and the anterior half-inch of the membranous portion were found disorganized. The diseased urethra existed as a hard, fibrous cord, perforated in numerous places, and so contracted that, on being split open by a longitudinal incision, little remained to mark the course of the canal. The whole of this disorganized urethra was dissected out with the cicatricial nodules about the perineal sinuses. A perineal vesical tube and a urethral tube were put in place in the manner just described. The urethral tube was retained for ten days, and the vesical one for nearly three weeks. The perineal wound healed practically by primary union, and in six weeks the opening left by the vesical tube was soundly healed. A year after the operation, a No. 18 (American) sound could be easily passed, and urination was normal. To the feel, the scrotum and perineum were soft and natural.

In the second case, the man was first seen suffering from extravasation. To open the bladder through the perineum, deepened as it was by so much infiltration, was likely to be such a prolonged and serious operation that supra-pubic drainage was performed. The other parts affected were freely incised. It was well that the opening was made above the pubis, for an abscess of the pre-vesical space was thereby opened, which could by no manner of means have been drained through the perineum. A fortnight later, the sloughs having separated, a further operation was performed. Part of the urethra was found to have almost sloughed away. The anterior end was defined by a catheter, and the cicatricial tissue about it excised. By passing a sound through the supra-pubic opening, down the urethra, the posterior end was cleared. In all one and three-fourth inches were removed. The structures were, as far as possible, drawn together over a urethral tube, as in the other case, and the bladder drained by a perineal tube. The wound was left to granulate. The tubes were removed as before, the urethral in ten days and the vesical in three weeks. The supra-pubic and perineal openings then quickly healed, and four months after operation a No. 17 (American) sound could be easily passed.—*Med. Chron.*

## SURGICAL MEMORANDA.

EMPYEMA.—A study of recent literature and observations made at a number of the largest clinics of this country, both east and west, have led Dr. Rafferty (*Med. Record*) to question the propriety of the extensive resection of ribs in any but the most desperate cases. And while there are, no doubt, many cases in which the resection of a portion of a rib gives better results than the simpler methods, there have been many cases thus operated more for the sake of doing the major operation than with the belief that it was necessary. Especially is this true of the operation of Estlander and the thoracoplasty of Schede. As for other novel procedures occasionally advocated, such as curetting the pleural cavity, etc., they need only to be mentioned to be condemned. So, too, the indiscrim-

inate use of antiseptic injections is to be strongly deprecated. Many fatal results are recorded as immediately following this practice.

Tuberculous Disease of the Knee.—Dr. H. W. Cushing (*Bost. Med. & Surg. Jour.*, No. 12, '96) concludes as follows: When you operate on a tuberculous knee, operate so as to remove the disease. An erasion when limited; an arthrectomy when extensive. Reserve the typical excision operation to correct deformity from bony anchylosis. If properly done the disease can be checked. Apparently cured. I say apparently, for no one can say when a tubercular patient is well. There will result little or no motion. There will be more or less atrophy. There will be more or less shortening. This result can occur even with marked coincident disease in other joints. Operation is indicated:—When the disease is unchecked by treatment; when it is extensive; when a patient cannot have proper conservative treatment; when the general condition demands it to save life; to correct deformity of the knee-joint.

Prostatic Hypertrophy.—In a paper read before the Brit. Med. Assoc., at its recent meeting, Dr. McEwen stated that he had operated in five cases, three by double orchectomy and two by resection of the vas deferens. His conclusions were: 1. In many cases castration causes more or less atrophy of the prostate. 2. Atrophy occurs most commonly when the prostate is soft. 3. It is of most value when the enlargement is general. 4. Cystitis may be relieved or cured. 5. In marked cystitis drainage is better. 6. It may do away with the necessity of the use of the catheter. 7. Or the catheter may be required less frequently. 8. Resection of the vas deferens acts more slowly, but the effect is similar.—*Brit. Med. Journal.*

Fracture of Patella.—Dr. George R. Fowler's method consists in exposing the fragments as an intermediate procedure, *i.e.*, after the immediate effects of the injury have subsided and before ligamentous union has occurred, for the purpose of clearing their surfaces of intervening soft parts, and the application of fixation hooks resembling Malgaigne's, though a single and not a double pair is employed. The incision is made either vertically, transversely or U-shaped, as indicated, and the hooks are inserted in the line of incision when possible, to avoid separate skin wounds. After carefully removing everything from between the fragments and applying hooks, the parts are stitched with sub-cuticular silk suture, sterile gauze and cotton are applied, and the limbs are enveloped in plaster-of-Paris splints for three weeks, at which time the hooks are removed.—*Med. Record.*

Prolapsus Ani.—Dr. Platt (*John Hopkins Hospital Bul., Jour. Am. Med. Assoc.*) resorted to the following procedure in the case of a child operated on in vain by other methods: At the junction of the skin and mucous membrane, just beneath the latter, a curved needle is inserted in the median line below, and a silk thread is carried half way around the anus and out again, in the median line above, reinserted in the same opening and brought out at the first puncture, making a purse-string suture. The little finger is then put in the anus and the string tied

snugly around it. Apparently, this would cause suppuration and possibly a fistula. It does nothing of the kind, nor does it cause any pain afterward. The child has his stools in the recumbent position. If the feces are at all hard, injections are given to soften them. After three weeks the suture is withdrawn when it heals immediately with no return of the prolapsus. By this method the bowel is kept in place long enough to contract adhesions.

MOVABLE KIDNEY.—Dr. Cordier (*American Journal of Obstetrics and Gynecology*) deduces the following propositions: 1. A movable kidney often produces a dilated stomach, with all the accompanying symptoms of a disease of the latter. 2. It is a fruitful source of gall stones, by the pedicle producing a partial obstruction of the common duct. 3. The bending of the ureter often gives rise to a hydronephrosis. This in turn is sometimes converted into a pyonephrosis. 4. It may produce death by a complete strangulation, by a torsion of the vessels and ureter. 5. By dragging on the abdominal aorta and kinking of the vena cava, a condition simulating an aneurism of these vessels may be produced. 6. Pain referred to the region of distribution of the spinal nerves is often induced by a movable kidney's disturbance of the abdominal basin. 7. A general nerve exhaustion (neurasthenia) is frequently induced by this condition interfering with digestion, assimilation, and elimination. 8. Nephrorrhaphy is a safe and effective surgical procedure. 9. All cases of movable kidney, if accompanied by symptoms pointing to the kidney as the source, should be operated upon. 10. In summing up the local and remote results of this now often-recognized condition, I think the correctness of the deductions has often been demonstrated by the disappearance of each and every symptom after a restoration and retention of the kidney in its normal position. 11. Symptoms are not to be relied upon in making a diagnosis of movable kidney; the physical examination is the only trustworthy guide.

## SURGICAL ITEMS.

The mortality after prostatectomy is still high—about 18 or 20 per cent. for all operators. It is gradually becoming less as the indications for the operation are better understood. The death rate of individual operators will undoubtedly continue to grow less as they become more expert in performing the operation, and the cases of relapse and failure will be much fewer as more experience is gained.—*Alexander.*

From the evidence now at hand, the operative surgery of epilepsy must be regarded as an experiment with a very uncertain future. The facts at our disposal seem to indicate that while trephining may be a justifiable measure in these cases, the careful and conscientious surgeon must warn his patients and the parents not to be too sanguine of good results. Statistics seem to prove that operative measures should only be employed in traumatic cases in which there are localizing features, such as a depressed fracture, a scar from an old injury or focal manifestations on the part of the brain.—*J. C. Oliver.*

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF
CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

## NEURASTHENIA ESSENTIALIS AND NEURASTHENIA SYMPTOMATICA.

BY F. X. DERCUM, M.D., PHILADELPHIA.

Clinical Professor of Nervous Diseases, Jefferson Medical College; Neurologist to the Philadelphia Hospital.

*(Concluded.)*

If we pause to analyze the various visual disturbances of neurasthenia we find that the same truth is evident. Here the principal symptoms are those expressive of ready fatigue. I will not pause to analyze them in detail, but simply to allude briefly to a few of them. One of the most common statements which we meet with from neurasthenics is that they are not able to read for more than a few minutes at a time, and that if they persist, the letters become blurred and indistinct, and that the effort gives rise to pain, generally headache. It is probable that in this symptom there is involved a three-fold weakness of retina, muscular apparatus and cerebral centres. Irritability is noted in the fact that many neurasthenics are unable to withstand any but the slightest exposure to light, the light giving rise to exaggerated and painful sensations. It is for this reason that so many neurasthenic subjects spontaneously begin the use of smoked glasses. These symptoms, ready fatigue and irritability, are primary symptoms. Other symptoms, however, are frequently present; thus patients will declare that everything appears as though seen through a mist or veil, or that objects look exceedingly dull, or, on the other hand, unusually bright, or that objects look as though they were far away, or at times excessively large. All of these symptoms are clearly secondary in value; they are all of them adventitious to the primary symptom, namely visual fatigue.

The same difference also obtains with regard to the disorders of hearing. Slight impairment of hearing coupled with auditary hyperasthesia, great irritability to sounds and noises, obtains in a very large number of cases, and these symptoms are beyond cavil primary and fundamental. In addition however, paræstheviæ are frequently complained of. They consist of various forms of tinnitus, such as roaring, buzzing, whistling sounds and at other times of throbbing, beating or tickling sensations. These are beyond a doubt adventitious and bear but a secondary rela-

tion to the fatigued condition of the auditory apparatus. I might pause to point out a similar truth with regard to the disorders presented by the senses of smell and taste, but it is hardly necessary. I need only to briefly allude to the excessive sensitiveness of some neurasthenic patients to odors, and also to the fact that olfactory paræsthesiæ sometimes occur. This is equally true of the sense of taste. The accuracy of the latter is often distinctly lessened, and very frequently paræsthesiæ are present, so that common articles of food like bread and meat present strange and often disgusting flavors.

When we turn to the motor phenomena we find that these also resolve themselves into primary and adventitious symptoms. Muscular weakness is so pronounced a symptom of the average case of neurasthenia that it was constituted by Charcot one of his fundamental symptoms or stigmata, and termed by him *amyosthenia*. This amyosthenia is a primary symptom, and yet it is frequently associated with other symptoms, such as tremor. Tremor may present itself in a characteristic manner as a fine intention tremor of the hands, or it may be limited to certain groups of muscles or even to a few fibres of a muscle. When present as an intention tremor it is most readily demonstrated in the extended hands. When limited to special bundles of fibres it is most frequently observed in the muscles of expression, notably in recurring twitchings of the orbicularis palpebrærum or of a few fibres of the frontalis or, it may be of a few fibres of the orbicularis oris. These intention and fibrillary tremors are evidently not primary but are adventitious and secondary and should be so regarded. The term primary should be restricted to the amyosthenia itself.

When we turn to the disturbances of digestion, of circulation, of secretion and of the sexual functions, the same general truth is again noted. For instance, regarding digestion, the primary symptom is that of digestion enfeebled and delayed; *i.e.*, atonic indigestion—an indigestion also associated with an atonic constipation. Now, what are the secondary symptoms that sooner or later make their appearance? To the existing delay of digestion, the symptoms of a gastric catarrh, the result of abnormal fermentation, accompanied by the formation of abnormal acids, such as butyric, are added. Evidently gastric catarrh with its abnormal acidity, excessive or diminished, is to be looked upon as a secondary or adventitious condition. The disturbances of the circulation afford another illustration. The coldness of the extremities, the feebleness of the pulse are primary symptoms and expressive of general weakness. The disturbances in the rhythm, as manifested by irregular action of the heart or of cardiac palpitation, are to be regarded as adventitious symptoms. The circulatory apparatus, together with the nervous mechanism controlling it, is in a condition of irritable weakness, and that as secondary outgrowths of this irritable weakness there should be gross disturbances of its rythmic action is not surprising, but these disturbances must be looked upon as secondary and as not essential to the clinical picture of neurasthenia. The disorders of rhythm may be so great as to mount to most frightful attacks of tachycardia. The various heart murmurs that are occasionally noted in neurasthenic subjects are likewise to be relega-

ted to the secondary group. The loss of vaso-motor tonus, as made evident by involuntary flushing of the face or other portions of the body, or, on the other hand, by such symptoms as aortic pulsation, are also to be regarded as secondary.

Again, the sexual disturbances also reveal as primary symptoms, weakness and irritability and, in addition, as secondary symptoms, various paræsthesiæ, such as pricking, creeping, throbbing or cold sensations. The secondary symptoms, here, as elsewhere, are indirect outgrowths of the primary weakness and irritability.

The psychic symptoms of neurasthenia can be isolated with the greatest readiness. The very first symptom that we note is the diminution in the capacity for study or for intellectual effort; just as the patient is incapable of long-continued .physical labor, so he is incapable of long-continued mental labor. To attempt to do mental work, sooner or later, brings on in the neurasthenic, symptoms of exhaustion. If the task be persisted in, the fatigue sensations become very pronounced, and, in addition to headache, secondary symptoms, such as sensations of constriction, giddiness and even vertigo make their appearance.

The next symptom that presents itself is also one indicative of weakness. It consists in the lack of the power of concentrating the attention, and this the patient frequently mistakes for loss of memory. Other symptoms of weakness are lack of spontaneity of thought, a diminution in the strength of the will, a condition of general indecision and mental and emotional irritability. These symptoms are all referable to the primary group. In a large number of patients, however, other symptoms make their appearance, symptoms which are clearly secondary in character; they associated with the general incapacity for exertion, the weakness of concentration and lack of spontaneity, there is often associated an apparently causeless, general sense of fear. This feeling of fear may be vague and ill-defined, and may consist merely of a general feeling of anxiety. More frequently, however, it takes some definite form. The patient experiences a sudden sense of fear which is uncomplicated and may be slight or may be so intense as to be horrible and overwhelming. Now, instead of assuming this generalized form, the fear may assume a special form, and here we have the special fears which have been described by various writers, notably by Beard. They are fears which find an apt illustration in the fear which a perfectly healthy person experiences when standing at a great height, even though they know themselves to be in a perfectly secure position. In neurasthenics, as is well known, these special fears assume the most aberrant forms. It is hardly necessary in this connection to refer to agarophobia, claustrophobia, and their congeners. Let it suffice to say that all of the forms of fear from the simple and purely generalized form to the most highly specialized forms all belong to the secondary group of symptoms. For some reason Charcot placed the various special forms of fear presented by neurasthenics in a third group of symptoms, but certainly if we regard neurasthenia as a fatigue neurosis with secondary outgrowths and complications, this formation of a third group of special mental phenomena is not justified.

Neurasthenia is not a vague ill-defined affection, as Binswanger would have us believe. I contend that it is an affection with a syndrome as well defined, as well established as any with which we, as clinicians, have to deal. The moment we regard neurasthenia in its true light, namely, that of a fatigue neurosis, much of the mystery passes away and, as pointed out, the essential symptoms, those directly expressive of fatigue, stand out boldly and prominently, and give to the disease its clinical features. The failure to assign to the secondary symptoms their proper value has been a prolific source of error and misconception. Often these secondary symptoms are quite prominent and striking, but they should not throw us off our guard. If the case be one of neurasthenia, some of the fundamental or primary symptoms can always be found.

If time permitted I would enlarge this discussion by inviting your attention to the pathology of true neurasthenia, would allude to the studies of Hodge with regard to the changes which nerve-cells undergo during fatigue, and also spend some time upon the histo-chemistry of neurasthenia—upon the probable source of the uric acid which is so often found in excess, and to point out how these factors enable us to draw still more clearly the differences between true neurasthenia and neurasthenia symptomatica, or spurious neurasthenia. Finally, permit me to allude to a condition which I myself have called Neurasthenia Terminalis. It is well known that prolonged and persistent derangement of function may be followed by actual tissue changes. Thus, a heart which is constantly overacting, the result of repeated and violent attacks of palpitation, may undergo hypertrophy, or the walls of the blood-vessels may become thickened, and, if the case persists sufficiently long and be associated with deranged tissue metabolism such as we have just alluded to, even atheromatus changes may take place in the vessels; or, again, if digestive disturbances persist sufficiently long, secondary changes may ensue, *i.e.*, terminal organic changes may occur in the digestive tract. That organic changes may also occur in other structures, such as the muscles and even the bones, there can be very little doubt. These changes are often suggestive of premature senescence. When any of these changes are present in a marked degree the case is classed by us clinically according to the diseased condition which predominates. To state the proposition in other words, simple and uncomplicated neurasthenia, if it persists long enough, results in actual tissue changes, and if the patient presents himself before these changes are accentuated in any one organ and are still slight and generalized, the case should still be considered as neurasthenic, but should be regarded, as I have suggested, as the terminal form. These are the cases which are largely intractable to treatment. The subject merits extended consideration, but time will not permit me to more than touch upon this interesting subject.

My object in this brief paper was merely to present in as condensed a way as possible my own interpretation of the symptomatology of neurasthenia, and was prompted especially by the publication of Binswanger's untenable and retrogressive views. I intended, namely, to point out the difference between true neurasthenia and spurious, or symptomatic neurasthenia, and also to give to neurasthenia its proper position in our nosology as a fatigue neurosis.

# PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

H. B. ANDERSON, M.D., C.M.,

Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital. 241 Wellesley Street

H. C. PARSONS, M.D., 97 Bloor Street West.

## ETIOLOGY OF INFECTIVE ENDOCARDITIS.

Kanthack and Tickell (*Edinburgh Medical Journal*, July, 1897) publish an article on this subject, based on an analysis of all the fatal cases which were observed in St. Bartholomew's Hospital from January, 1890, to March, 1897, and subjected to a necropsy. These amounted to eighty-four. The writers very properly insist that the term "infective" should be used and not "malignant" or "ulcerative." The question always is, Are the vegetations due to bacteria or not? Micro-organisms may cause acute endocarditis without ulceration, and, conversely, ulceration may be found in their absence. In all but ten cases either old cardiac disease or an inflammatory infective lesion accompanied the endocarditis. Of these ten cases, malignant disease existed in four, and a possible pneumonia in one, so that only five cases can be considered as uncomplicated. Old cardiac disease was present in fifty-four cases (64 per cent.), sixteen of which were accompained by a recognized infective process,—viz., pneumonia in seven cases, pyogenetic process in four, empyema in one, vaginal and uterine disease in two, bronchiectasis in one, and influenza in one. Of the remaining thirty cases in which old cardiac disease was absent an infective process was discovered in twenty, which either preceded or accompanied the endocarditis—viz., pneumonia in five, pyogenetic process in six, empyema in one, vaginal and uterine disease in two, otitis in three, tubercle in two, and typhoid fever in one. Of all acute diseases pneumonia is most frequently complicated with endocarditis. The writers found an antecedent pneumonia in 14 per cent. of all the cases. Where the pneumonia is croupous the pneumococcus is the cause of the endocarditis, and seems to be attracted and arrested by a pre-existing cardiac lesion. Endocarditis is by no means common in typhoid fever. When it occurs, either streptococci and other pyococci or typhoid bacilli have been found in the heart's blood. Similarly, in those rare cases of infective endocarditis occurring in diphtheria or gonorrhea, the Klebs-Loeffler bacillus or Neisser's coccus may be present, or streptococci and other pyococci. In one case there was a tuberculous endocarditis. Mixed infections are common in all these cases. Therefore, when an endocarditis complicates an infective fever it may be (1) homologous, (2) heterologous, or (3) mixed infection of the endocardium.

## CHOLECYSTITIS IN ENTERIC FEVER.

Dungern (*Münchener medicinische Wochenschrift*, June 29, 1897, and *British Medical Journal*) first observes that mixed infections are very important in enteric fever, but that the typhoid bacillus may unquestionably be the cause of some complications. Severe complications involving the biliary passages are rare in enteric fever, and here the typhoid bacillus itself is very frequently the cause. As a result of the penetration of the typhoid bacillus into the gall-bladder, gall-stones may ultimately occur. The author is only acquainted with four cases of cholecystitis with or without calculus-formation in which the typhoid bacillus was the cause. He gives short details of these four recorded cases, and adds the following one: A woman, aged 46 years, had typhoid fever fourteen and a half years previously. Nearly five years afterwards she had attacks of pain accompained by vomiting, but without jaundice. During the next one or two years she had many attacks, but then remained quite free from them for six years. The attacks then recurred, and a hard swelling was felt in the region of the gall-bladder. This swelling was cut down upon by Kraske, and an abscess was opened, and 150 cubic centimetres of brownish-yellow pus evacuated. The pus was not bile stained. Any connection of the abscess with the gall-bladder was not vigorously sought for. No gall-stones were found, but occasionally the discharge was stained with bile. The typhoid bacillus was found in the pus in pure culture. It was submitted to all the ordinary tests and gave the serum reaction. It is most probable that the typhoid bacillus penetrated into the gall-bladder at the time of the enteric fever, but the interval of five years before the first attack of biliary colic is striking. In the last year of the six years' interval the patient suffered from a periostitis of the lower jaw, which may also have been due to the typhoid bacillus. If the above suppositions are true, the typhoid bacillus retained its vitality for fourteen and a half years. The patient's blood produced immobilization and agglutination in typhoid bacilli. The typhoid infection has been known to involve the biliary system even without any intestinal lesion. The author then refers to the bacillus coli communis, and its relation to suppuration; this micro-organism may even produce a disease not unlike enteric fever. The typhoid bacilli from the author's case proved themselves to be virulent when injected into animals, but the virulence was slight.

---

## ACUTE RHEUMATISM.

Riva (*Centralbl. f. inn. Med.*, August 14th, 1897) makes a preliminary communication upon the etiology of this disease. He first refers to the fact that, although it is generally accepted that acute rheumatism is an infective disease, yet the pathogenic microbe remains undiscovered. Perhaps this is due to the nutrient media used for its cultivation not being suitable. The author obtained synovial fluid for this purpose from the joints of horses. To the peptone broth, fish jelly (8 to 10 per cent.)

or fucus crispus (1 to 2 per cent.) is added. A small quantity of glucose (1 to 2 per cent.) is also added, and just enough lactic acid to make the medium slightly acid. He has in addition used broth without the jelly or fucus, also the fluid alone from the inflamed joints, etc. Riva has thus examined 8 cases of acute rheumatism, 7 of moderate severity, and 1 very severe and complicated with pleurisy, pericarditis, and perhaps broncho-pneumonia. The fluid to be examined was always obtained from the knee-joint, and in 3 cases the blood was also examined. Five or six drops of the synovial fluid were obtained under the strictest precautions and added to the culture tubes. In this way a growth was obtained in all cases, whereas the ordinary nutrient media remained sterile. The author cannot as yet draw any definite conclusions as to the morphology and biology of the microbe. The growth was luxuriant at 35° to 37° C., but only slight at 15° to 17° C. The surface growth was in the form of a film. The gelatine was liquefied at ordinary room temperature, otherwise it became turpid. Growth appeared in media not acidified with lactic acid, but it was sparse. Glucose was likewise not essential but useful. In young colonies the microbe was found, assuming later an egg shape, and varying in size from a leucocyte to a large torula. Later these bodies disappeared and two different kinds of bacilli were found. Thus, (1) a growth similar in all cases was always obtained, and (2) no growth was obtained with one or two exceptions, when subcultures were made upon the ordinary nutrient media. In all probability this is the microbe causing acute rheumatism.—*British Medical Journal.*

## TYPHOID FEVER PUMPS.

The discussion of typhoid fever epidemics should direct the attention of the health authorities to the danger lurking in the old-fashioned pumps. Many are still found in our modern cities, and to our knowledge many are still used in Philadelphia. The exceedingly dangerous quality of water pumped from springs in the vicinity of city dwellings is well known. The ground underlying a city is saturated with fluids escaping from old privy wells and drains, and the springs are therefore almost certain to be contaminated with typhoid fever germs. It is scarcely possible to think of a more dangerous drinking water than that pumped up from such urban springs. The menace to the public health from city pumps is emphasized by reason of the fact that tainted water is often very clear and sparkling. In a city like Philadelphia, for example, where the water supplied by the municipal government is often muddy or inky black, and with an unpleasant odor, uninitiated and thoughtless people are certain to prefer the sparkling, limpid pump water to that drawn from hydrants and household spiggots. It would never occur to such people that the pump water needs boiling, to kill the typhoid fever germs almost certainly contained in it, much more certainly than in the water drawn from the city mains. We have seen children and others drawing or drinking water from the wooden pump on the north side of Lancaster Avenue near Thirty-seventh Street, and have often wondered why the Board of Health

permitted such lurking dangers to remain. It would be interesting to know whether the vicinity of each pump is not conspicuous for cases of diarrhœa, typhoid fever and other sickness.—*Philadelphia Medical Journal.*

## PHYSIOLOGICAL ALBUMINURIA AND THE BICYCLE.

It seems from certain observations made by Müller (*Munchener medicinische Wochenschrift, Centralblatt fur innere medicin*) that in albuminuria that cannot be distinguished with the microscope from that of genuine kidney disease, but one that must be looked upon as physiological, since it disappears within a few days after the cessation of the exertion, leaving absolutely no signs of the disease. Müller's observations were made on twelve bicyclists, eight of whom he calls trained and four untrained. Among the eight trained wheelmen there was only one whose urine contained albumin before the exercise, but after it the urine was albuminous in seven. In six of them, including the one whose urine was free from albumin, there were at the same time present in the urine casts in numbers as great as are generally met with in acute or chronic parenchymatous nephritis, and the two others had a few hyaline casts. Most of the casts were hyaline; the minority showed distinct renal epithelia and were granular. Free renal epithelia were found in every instance. White blood corpuscles appeared sparingly, but red corpuscles were not met with at all. Among the four untrained wheelmen, in all of whom the urine was free from albumin before the exercise, two showed albuminuria and one cylindruria after riding from an hour and a half to three hours.—*N. Y. Med. Jour.*

## CYSTIC TUMOR OF THE SPLEEN.

Baginsky (*Berliner klinische Wochenschrift*) reports the removal of a large hemorrhagic cyst of the spleen, which developed in a girl 12 years old, after a fall on the abdomen. The tumor formed a large mass occupying the left hypochondrium, and was fluctuating below, but solid above.

The blood, on examination, was found to be normal. Exploratory puncture revealed the presence of a brownish fluid, which was examined for echinococcus hooklets, with negative results.

The tumor increased gradually and began to affect the general health, when operation was performed. Upon opening the abdomen a large hemorrhagic cyst, which contained a quart of bloody fluid, was found in the spleen.

The cyst was removed, and upon examination the wall was found to be composed of dense connective tissue and normal spleen substance.

The child recovered entirely from the operation, and was discharged in good health.

Baginsky also refers to another similar case which occurred in a girl 7 years old, and proved fatal at the post-mortem examination. Three cysts were found in the ductus choledochus which had resulted from the retention of bile due to inflammatory obstruction ofthe duct.—*University Med. Mag.*

# PAEDIATRICS.

IN CHARGE OF

ALLEN M. BAINES, M.D., C.M.

Physician, Victoria Hospital for Sick Children; Physician, Out-door Department Toronto General Hospital. 194 Simcoe Street, and

J. T. FOTHERINGHAM, B.A., M.B., M.D., C.M.,

Physician, St. Michael's Hospital; Physician, Outdoor Department Toronto General Hospital; Physician, Hospital for Sick Children. 39 Carlton Street.

## PROGRESS IN PEDIATRICS DURING THE VICTORIAN AGE.

Those who are able to look back for no more than half the period over which the Queen's reign has extended, will yet be able to perceive that among the social changes which have come about have been some which nearly affect childhood. More thought and more skill are devoted to their education, and greater care to the preservation of their health, while greater anxiety is displayed to make the period of childhood happy. If the tendency of the age has been such, it is not surprising that it should have witnessed also, on the part of the medical profession, a greater disposition to study the pathology, the etiology, and the treatment of disease as it occurs in childhood. The development of interest in the subject within the last fifty years, and the growth of knowledge in connection with it has indeed been remarkable. The gains have been made simultaneously in this country, in Germany, in France, and in America.

That this assertion can truly be made is due to the scientific spirit and unselfish devotion exhibited at an early date by Dr. Charles West, who may justly be called the founder of the study in this country. By his writings, which have been translated into many languages, he has been one of those who have influenced most powerfully medical opinion throughout the world, towards a more serious apprehension of the importance of acquiring a better knowledge of the causes and the cure of the diseases most prone to afflict childhood. It is, therefore, with great pleasure that we are able to print below some brief reminiscences which Dr. West has been good enough to write in response to a request for his assistance:

"At the time when I settled in London, in the year 1838, the only English books specially treating of the diseases of children were those of Dr. Underwood and Doctors Maunsell and Evanson; and the only institution specially set apart for children's diseases was the dispensary in the Waterloo Bridge Road, where I worked for twelve years. During that time I preserved a record of 600 cases and 180 *post-mortem* examinations, made at the homes of the poor in Lambeth and Southwark.

"The results of these observations appeared partly in the medical journals, and completely in the *Medical Gazette*, as 'Lectures on the Diseases of Children,' which were delivered at the Middlesex Hospital,

and were afterwards published, in 1848, as a separate book. This book has since gone through seven editions, the last of which was based on the record of 2,250 cases, and 650 *post-mortem* examinations, and appeared in 1884. This book has gone through five editions in America, four in Germany, two in France and two in Italy, and has also been translated into Spanish, Danish, Dutch and Arabic.

"When the Hospital for Sick Children, in Ormond Street, was opened, in February, 1852, no other children's hospital existed in England or in America. At present there are forty-three in England, Ireland and Scotland, and I know not how many in America—all lineal descendants of the Ormond Street Hospital, which opened with fourteen beds and one little girl—the solitary in-patient.

"The foundation of a hospital for sick children was the dream of my youth, and the occupation of thirty years of manhood. I looked forward to helping to organize the institution which is housed in the building planned by me in conjunction with my dear friend (the late Mr. Edward Barry), and which, like the old hospital, was fitted and furnished throughout by me, and I trusted that when old age came I might be allowed to linger about the place to which my heart turns as a parent's towards his child.

"This happiness has been denied me to my lifelong heartbreak; and it is now too late for me to hope for more than this—that when I have passed away those to whom my memory will still be dear may hear my name sometimes mentioned as the founder of the first children's hospital that ever existed in this country, and as having given the impulse to that movement which has led to the children's hospitals in almost every town in England and America, and has enriched the once scanty literature of the subject with contributions of surpassing value.

"That with increased opportunities for observation, knowledge too would increase was certain. The evidence of this is seen in various papers communicated to the *Transactions* of societies, and to medical journals, as well as in systematic works. Of both, the merit is in many instances very great, and to me in my old age it is a real pleasure to see some of my mistakes corrected, some of my doubts answered, and my lagging pace outstripped by younger runners in the race, of which the goal is not alone the honor of him who wins the race, but above all the common good. May they act on the motto of the first great inmate of 49, Great Ormond Street, *Non sibi sed toti.*"

The movement which made it possible to found the Hospital for Sick Children in Great Ormond Street did not by any means expend itself in that effort. Owing not a little to the influence, direct or indirect, of Charles Dickens, public sympathy was aroused, and numerous hospitals sprang up in various parts of London; thus hospitals for children were founded in Pimlico and in Chelsea in 1866, in Hackney in 1867, in Shadwell in 1868, in Southwark in 1869, and in Paddington as recently as 1883.

Edinburgh can boast that the first step towards a study of diseases in children was taken there somewhere about the year 1838, by Dr. William Campbell, lecturer in midwifery and diseases of women, in the extra-mural school, who gave a separate course of lectures on that subject.

In 1856, Dr. Charles Wilson urged the "expediency of founding a hospital for the diseases of children in Edinburgh" in a series of articles in the *Edinburgh Medical Journal*. Nothing practical followed. But again, in February, 1859, another series of letters appeared in the *Scotsman* above the signature "Sigma, M.D." These are now known to have been written by Dr. John Smith, who was not only a pioneer in this department of medicine, but also in that of dental surgery. At that time, in the eight largest towns of Scotland, the mortality among children under five years of age was 46 per cent. The public press now espoused the cause of the children, and the result was that, on May 5, 1859, at a public meeting, it was resolved, on the motion of Dean Ramsey, that a hospital for the relief of sick children be forthwith established in Edinburgh. On February 15, 1860, a small hospital of twenty-four beds was opened. It was extended from time to time until it had seventy-three beds. With a view to the extension of the Royal Infirmary the managers of that institution bought the grounds of Meadowside House, and the directors of the Children's Hospital in turn bought the Trades' Maiden Hospital and grounds at Rillbank Terrace. The old building was pulled down, and an excellent hospital of 120 beds built on the site. This was opened by Princess Beatrice on October 31, 1895.

The multiplication of hospitals is not an unmixed advantage, but these facts are mentioned as an indication of the increased interest exhibited, during the present reign, in the study and the treatment of disease in childhood. The labors of many physicians and surgeons have gradually accumulated a body of knowledge which has been fully placed at the disposal of the profession in their writings, and through the instruction which has been given in many of these hospitals to students and junior practitioners. It has been said, with what truth we shall not pretend to say, that "pediatrics is the specialty of the general practitioner." Certain it is that the treatment of the diseases of children constitutes no small part of general practice, and a part the importance of which has been steadily growing in the eyes of the public.—*British Medical Journal. 1897. No. 1903.*

---

THE CAPACITY OF THE INFANT STOMACH.—Stomach capacity in the very young oftentimes becomes an important factor in artificially-fed babies. Unless careful measuring of food is observed, over-feeding is very apt to occur, particularly in cases of mild pyrexia, where more is consumed than is required simply to obtain an increased quantity of fluid, plain water satisfying every want if given instead of the bottle. The following approximations of stomach capacity are from Holt, and are of assistance in regular bottle-feeding. At birth, ℥ i; at two weeks, ℥ ii; at three months, ℥ 4½; at six months, ℥ 6; and at twelve months, ℥ 9. Loss of weight and fretfulness are the leading symptoms of insufficiency of proper food. A normal and properly nourished child should increase nearly one-third during the first month, about one-half during the first six months, and at the end of one year be about three times its original weight (Donkin).

FRANK WHITEFIELD SHAW, M.D.,
In *Brooklyn Medical Journal.*

# OBSTETRICS AND GYNAECOLOGY.

IN CHARGE OF

G. P. SYLVESTER, M.D.,
Corner Isabella and Church Streets.

C. A. TEMPLE, M.D., C.M., F.T.C.M.,
Assistant at St. Michael's Hospital. 200 Spadina Avenue.

## PREGNANCY AND FIBROID TUMORS.

BY H. C. COE, M.D., OF NEW YORK.

The subject assigned to me is not only quite familiar, but is one in regard to which there has been no essential change in the views of accepted authorities during the past twenty years, or since the publication of Gusserow's exhaustive monograph on uterine neoplasms. It would, therefore, seem to be a thankless task to discuss such a well-worn theme. However, with the advance of aseptic surgery, we may at least record more intelligent methods of dealing with the complication in question.

Assuming that the question of fibroids in connection with labor and the puerperium is one that more directly concerns the obstetrician, we shall confine ourselves to what may be called its gynecologic phase.

It is a curious fact that in spite of the somewhat extensive literature of this subject there exists a considerable diversity of opinion with regard to the significance of pregnancy occurring in a fibroid uterus. Thus, we read in a recent text-book that "with tumors above the internal os from 70 to 80 per cent. of the patients may be expected to go on to term;" while a well-known authority (Bland Sutton) states in a clinical lecture just published that "when a woman with a myomatous uterus conceives it is certain that her life is in jeopardy, not only so long as the fetus remains within it, but also when it is expelled, whether this occurs prematurely or at full time." It is evident that the acceptance of either of these extreme views must lead the inexperienced either to adopt an ultra-conservative policy, or to lean too strongly toward radical methods.

It is impossible to lay down general rules for the treatment of a complication in which the conditions differ so essentially in different cases. The skill, experience, and bias of the surgeon, as well as the anatomic conditions, are to be considered. One who regards the presence of a uterine fibromyoma of moderate size as a sufficient indication for a radical operation, irrespective of serious symptoms, will naturally be more indifferent to the interruption of pregnancy than the gynecologist who operates only for the relief of urgent symptoms, and prefers to save the uterus when this is possible. But, from the standpoint of the general practitioner, whose laudable desire is to avoid operative inference wherever it is compatible with the safety of the patient, it is desirable that a few definite facts should crystalize out of the mass of conflicting evidence.

The statement so frequently reiterated that conception is rare in women with fibroid uteri is doubtless correct, but with certain exceptions. That it does not apply to subserous growths is well known to those who practice among the negro race.

Unfortunately, the presence of small interstitial fibroids in the lower uterine segment, especially those which develop between the folds of the broad ligament, do not by any means offer that hindrance to conception which we are ordinarily taught to believe.

It is unsafe to assume that the presence of any uterine neoplasm is absolutely incompatible with pregnancy; so that the natural corollary is that, having an unmarried patient with a fibroid even of moderate size (unless it be of the subperitoneal variety) it is the duty of the physician to state frankly the possible risks of matrimony and to dissuade her from it.

In considering the influence of pregnancy upon fibroid tumors, and conversely, the effect of such growths upon the course of pregnancy, we shall assume that the elementary facts with regard to the genesis, mode of growth, degeneration, and usual complications of fibromyomata are sufficiently familiar to you. Without subscribing to the extreme view that every fibrous neoplasm, though innocent in itself, is to be regarded as a possible menace to life at some indefinite period in the future, we must all admit that certain changes may occur in the tumor itself, or in its environment, which may cause it to assume serious clinical importance. As is well known, the indications for surgical interference in these cases are progressive increase in the size of the tumor, hemorrhage and pressure-symptoms—one or all. That these may develop in connection with a fibroid which has previously been quiescent under the influence of pregnancy, at once suggests the importance of the complication. That such a tumor, especially when interstitial, should rapidly enlarge under the influence of the increased blood-supply is self-evident. This enlargement is not always permanent; it may be simply due to edema, but none the less it gives rise to marked pressure-symptoms, especially if impacted within the pelvis.

Changes in position of the tumor and uterus as the latter enlarges are not unimportant. A subserous growth at the fundus may cause retroflexion and incarceration of the gravid organ, or may press it downward upon the bladder.

The liability of pedunculated tumors when displaced by the enlarged uterus to suffer torsion of the pedicle—with all the serious results which may ensue—has been noted by several writers. Moreover, the occurrence of localized peritonitis with the subsequent fixation of the growth and uterus by adhesions has often been demonstrated at the operating-table.

Among the internal changes which may take place in the neoplasm itself in consequence of prolonged pressure, obstruction to the circulation, etc., are hemorrhage, cystic degeneration, and even necrosis.

Clinically, the site of the growth is by far the most important point. All agree that subserous tumors at the fundus, even when of large size, may be influenced but slightly, if at all, by pregnancy, which may advance to full term and be terminated in an entirely normal manner.

Small interstitial growths may be equally quiescent, and many cases have been reported in which submucous polypi have been recognized only after the birth of the child. But, it is equally certain that growths of either the subserous or interstitial variety situated in the true pelvis, especially if these be impacted or adherent, may give rise to disturbances entirely out of proportion to their size; hence they always cause more or less apprehension should pregnancy occur.

Did time permit, I could report fatal cases of ureteral and intestinal obstruction, of septicemia, and of thrombosis, due to the pressure exerted by fibroid tumors of small size complicated by pregnancy. I have discussed this subject in a former paper on "Impacted Intrapelvic Tumors" (*Medical News*, October 30, 1897). Nor is this the only danger from growths so situated. If abortion occurs spontaneously or is induced, even as early as the second or third month, the cervical canal may be so encroached upon that it is impossible for the product of conception to pass, and then serious hemorrhage or sepsis may result.

Fortunately the condition of the endometrium in cases of sessile submucous fibroid is such that conception is unlikely to occur, but when it does, premature expulsion of the fetus is the rule, and with it often an alarming hemorrhage. We need not dwell upon the dangers of conception in connection with intra-uterine polypi—a somewhat rare complication. Sloughing of the growths during pregnancy or after delivery is always to be apprehended, as experience proves.

As to the influence of fibroid tumors on the course of pregnancy, it may be said in general that we cannot always predict what the outcome of an apparently unfavorable case will be. While the gravid uterus is apt to enlarge irregularly, and often to suffer displacement, as before stated, it may, as it rises out of the pelvis, carry with it a tumor which was supposed to be impacted, and thus naturally prevent the complications which were feared. Such a fortunate development could, of course, not be hoped for in the case of growths in the lower segment. The latter, however, may not affect the course of the pregnancy, which goes on to term with all the risks attending labor under such circumstances. With large interstial fibroids, on the other hand, the probability of early detachment of the placenta is great, or if pregnancy advances there is imminent risk of accidental hemorrhage. The imperfect contractile power of the uterus in this condition is well recognized, as is also the consequent risk of hemorrhage and retention of the product of conception.

Although foreign to the present discussion, it may not be amiss to call attention to the fallacious view that while fibroids may enlarge under the influence of pregnancy, they undergo a notable diminution in size, or even disappear, during the process of involution. Under favorable conditions (as in the case of small intramural growths) such a diminution may sometimes be observed, but to hope that such a growth will entirely disappear is hardly less reasonable than to expect its total removal by electricity. One would hardly recommend pregnancy as a cure for fibroids.

The question of the diagnosis of pregnancy in a fibroid uterus is one which concerns the general practitioner quite as much as the specialist.

The history may be entirely misleading, especially where the patient is unmarried or the periods are irregular. Rapid enlargement of the tumor in a woman who has previously been under observation, in the absence of evidences of degenerative changes, would cause suspicion. This sign alone led to the diagnosis of pregnancy in two cases in which I performed hysterectomy for large multiple fibroids. Both patients were unmarried, one being a young girl, the other a negress so advanced in years that she was thought to have passed the menopause.

With a retro-uterine or intraligamentous growth the diagnosis would be comparatively easy because the softer body of the uterus could be isolated from the tumor. Asymmetry of the uterus is not an infallible sign, by the way, as it has been noted in normal pregnancy. Dermoids and solid tumors of the ovary, when impacted in the cul-de-sac, adherent to the uterus, are so often mistaken for fibroids that the error should never be a subject for criticism.

If there is any doubt as to the true condition, examination under æsthesia is not only advisable, but obligatory. It is so important to determine not only the fact of pregnancy, but the precise character, relation, and range of mobility of the tumor, that one cannot afford to neglect any means of arriving at an exact diagnosis. This is especially true if the question of the performance of a radical operation is under consideration. Any one can recognize a good-sized fibroid; this is an elementary point. There are many other things to be taken into consideration.

The reproach that gynecologists of the present day have become more careless in regard to diagnosis as they have increased in operative skill is not undeserved. We do not examine either the inside or the outside of the uterus as carefully as did our predecessors in the art, being content to wait until the abdomen is opened before trying to settle disputed points. The prompt recognition and proper appreciation of the complication which is under discussion calls for no small amount of diagnostic acumen. If skill and experience are requisite for the making of a correct and exhaustive diagnosis, certainly in the decision as to the best course of treatment to pursue there is opportunity for the display of the ripest judgment. As was stated at the outset, no fixed rules can be applied. Each case must be decided by itself, since no two are exactly alike. While the physician will naturally be somewhat influenced by the wishes of a patient who earnestly desires offspring, he cannot allow this factor to have much weight when it is evident that it is impossible for pregnancy to continue to the full term without imminent risk to the patient.

When the tumor, or tumors, is subserous and the uterus enlarges symmetrically, there will, of course, be no occasion for solicitude. A pedunculated, movable growth will bear watching, since symptoms of torsion may require a prompt resort to celiotomy; or, it may slip down into the pelvis, so that it will be necessary to push it above the brim. A fibroid of considerable size, situated in the anterior or posterior uterine wall, may also take care of itself and cause no solicitude even during labor.

(*To be continued in our next.*)

# MEDICAL SOCIETY REPORTS.

## ONTARIO MEDICAL ASSOCIATION.

The eighteenth annual meeting of the Ontario Medical Association was held in Toronto, June 1st and 2nd, Dr. William Britton presiding.

Dr. E. L. Shurley, President of the Michigan State Medical Society, was introduced and given a seat on the platform.

Dr. A. McPhedran presented the report of the Committee on Papers and Business, and moved its adoption. Carried.

The reception of the report of the Committee of Arrangements was postponed.

Dr. Greig, Toronto, read a paper on "Infant Diet."

Dr. George Peters, of Toronto, opened the discussion in Surgery: subject, "Treatment of Fractures of the Skull." This was discussed by Drs. Bingham, T. T. S. Harrison, T. K. Holmes and I. H. Cameron. Dr. Peters closed the discussion.

Dr. Sampson, of Windsor, read a paper on "Conclusions Culled from Thirty Years' Experience."

The President read a communication from Dr. Rogers, chairman of the Committee of Foreign Invitations of the American Medical Association, extending to the members of the Ontario Association an invitation to be present at the Denver meeting.

On motion of Dr. Harrison, seconded by Dr. McPhedran, a vote of thanks was tendered to the American Association for their kind invitation.

The secretary read the minutes of the morning session.

Dr. Ryerson read the report of the Committee of Arrangements, which was adopted.

Dr. Bruce Smith presented the first interim report of the Committee on Credentials, which was adopted.

Dr. Britton then delivered the presidential address. He was tendered a hearty vote of thanks, on motion of Dr. John Coventry, seconded by Dr. Harrison.

Dr. W. J. Wilson moved that the regular order of business be suspended, as he had a resolution to bring before the meeting. Carried.

Dr. Wilson moved, that, in the opinion of this Association, no one should receive free treatment as an out-door patient in our public hospitals except those receiving their hospital maintenance from the municipality to which they belong.

Dr. Sampson moved, in amendment, that a committee, consisting of Drs. Coventry, John Wishart, T. K. Holmes, Bruce Smith, A. H. Wright, J. C. Mitchell, W. J. Wilson and C. O'Reilly, be appointed to consider the various recommendations made in the President's address.

On motion of Dr. Ross, seconded by Dr. Powell, Dr. Wilson's resolution was tabled.

Dr. A. T. Hobbs, of London, read a paper on "Some Present Methods of Treatment of Patients at London Asylum for the Insane." This was discussed by Drs. J. Russell, Bruce Smith and J. F. W. Ross.

The Association then divided into sections.

MEDICAL SECTION.

Dr. J. C. Mitchell was appointed chairman in this section, Dr. Brown acting as secretary.

Dr. R. Ferguson, of London, read a paper on "The Injurious Effects of our Overwrought School System on the Health of Public and High School Pupils."

Dr. Ferguson, at the end of his paper, introduced the following resolution:—

"That this section of the Ontario Medical Association expresses its conviction that the school pupils of this province are overworked; that the examination system is overdone, and that the strain and cramming due to excessive study are injurious to the mental and physical constitution of the pupils; that this section recommends that the number of school studies be lessened, and that the curriculum be framed with a due regard for the mental capacity and the preservation of the health of the school children."

This was discussed by Drs. Sheard, Spence and Britton. Dr. Ferguson closed the discussion.

The chairman suggested that those who had spoken on the subject constitute a committee to consider the resolution, and report before the general session of the Association.

Dr. C. J. O. Hastings read a paper on "Toxæmia of Pregnancy."

A paper on "Vicarious Urination" was presented by Dr. A. T. Rice, of Woodstock. This was discussed by Drs. Adams, Hastings, McLurg, Cruickshanks, MacCallum (London), Fenton, Chambers; Dr. Rice closing the discussion.

Dr. C. B. Oliver's paper on "The Traumatism of Labor" was taken as read.

Dr. Walter McKeown read a paper on "The Application of the Principle of Osmosis to the Treatment of Toxaemia."

Dr. Olmstead's paper was postponed.

SURGICAL SECTION.

Dr. Angus McKinnon was appointed chairman of the section, and Dr. Herbert A. Bruce secretary.

Dr. A. Primrose presented a paper on "Operative Methods in the Conservative Treatment of Tubercular Joints." This was discussed by Drs. Coventry, A. Davidson, H. P. Galloway and C. L. Starr. Dr. Primrose replied.

Dr. Holmes was appointed chairman while Dr. McKinnon read his paper on "Supra-Pubic Prostatectomy." This was discussed by Drs. A. B Welford, Greig, Forfar, H. H. Oldright, Holmes and Peters. Dr. McKinnon replied.

The section then adjourned.

EVENING SESSION.

Dr. McPhedran presented his paper on "Cretinism in Ontario," illustrated with lantern slides.

Dr. H. A. MacCallum opened the discussion in Medicine on "Excretion in Cure and Immunity." This was discussed by Dr. Anderson.

Dr. J. C. Adami, of Montreal, read a paper on "Syphilitic Cirrhosis."

THURSDAY MORNING.

The President ruled that papers read be handed to the secretary, to be disposed of by the Committee on Publication.

Dr. Holmes, of Chatham, opened the discussion in Gynecology: subject, "Carcinoma of the Uterus." This was discussed by Drs. Rowe, Georgetown; and A. A. MacDonald, of Toronto.

Dr. A. H. Wright presented a paper on "The Management of Difficult Breech Labors. The essayist demonstrated his method by the use of a mannikin. Drs. C. J. Hastings, W. Oldright, Bray, and Rice discussed the paper.

Dr. J. H. Richardson was invited to the platform, and briefly addressed the Association.

A communication was read from Dr. A. M. Rosebrugh, secretary of the Prisoners' Aid Society, regarding the establishment of a Home for Inebriates. The President said that he would, with the consent of the Association, appoint a committee, whom he would ask to consider the matter, and report at the next annual meeting. This was approved of by the meeting. The President referred the matter to the Committee on Public Health.

Dr. McKinnon begged the privilege of introducing a motion: That the dinner of the Association take place on the first evening of the Association, and that the out-of-town members pay their own way. Seconded by Dr. Rowe. Carried.

The Association then divided into sections.

MEDICAL SECTION.

Dr. A. T. Rice, of Woodstock, was appointed chairman of this section.

Dr. R. Doan, of Harrietsville, read a papor on "My Experience with Antitoxin in the Fall of 1897." This was discussed by Drs. E. L. Shirley, C. Sheard, Price-Brown, Adami, J. M. Johnston, McPhedran and Samson. Dr. Doan closed the discussion.

Dr. Heggie then read a paper on "Hyper-resonance of the Chest a Premonitory Symptom of Pulmonary Tuberculosis.'

Dr. P. H. Bryce read a paper on "The Effect of the Climate of our Canadian North-West on Patients with Tuberculosis."

The section then adjourned.

SURGICAL SECTION.

Dr. N. A. Powell read a paper on "Cat-gut, Gauze and Sponges: What are the best Methods of their Preparation?"

Dr. Oldright, Sr., read a paper on "When Should we Operate?" illustrated with cases. This was discussed by Drs. McKinnon, Riddell, McKenzie, C. Starr and Holmes.

Dr. G. H. Burnham read a paper on "The Various Operative Methods of Dealing with Eyes Lost through Injury or Disease." This was discussed by Dr. Chas. Trow.

The section then adjourned.

The Association then adjourned for luncheon at the Royal Canadian Yacht Club House.

A clinic followed at the Victoria Hospital for Sick Children. Dr. W. B. Thistle showed two cases of rheumatoid arthritis. Dr. Geo. Peters showed (1) a case of teratoma—two tumors on the back of a child, each containing intestine; (2) a case of ectopia vesicæ, with prolapse of the rectum; (3) a case of empyæma.

Dr. Primrose showed (1) a case of psoas abscess, in which he had operated without drainage; (2) a case of deformity due to birth palsy; (3) a case of arthrectomy for tuberculosis of the knee-joint; (4) a case of Calot's operation for forcible reduction of spinal deformity.

Dr. Crawford Scadding made some remarks on the administration of chloroform in the prone position. He showed a case of rickettes.

Dr. Powell showed a case in which he had fractured both lower limbs by manual force, followed by plaster Paris splintage for the correction of deformity.

The hot-air bath as used in the treatment of surgical and medical diseases was shown, and its operation demonstrated.

EVENING SESSION.

Dr. Britton presided.

The minutes of the preceding session were read and adopted.

Dr. McPhedran presented the report of the Committee on Nominations. It was as follows: Next place of meeting, Toronto. President, W. J. Gibson, Belleville; first vice-president, J. F. W. Ross, Toronto; second vice-president, I. Olmstead, Hamilton; third vice-president, W. J. Rowe, Georgetown; fourth vice-president, N. McCrimmon, Kincardine; general secretary, John N. E. Brown; assistant secretary, E. Hulbert Stafford, Toronto; treasurer, Geo. Carveth, Toronto; and to the Committee on Credentials were added W. J. Wilson and W. J. Craig, Toronto; to the Committee on Public Health, J. Hutchinson, London, and Gilbert Gordon, Toronto; to the Committee on Legislation J. C. Mitchell, Enniskillen, and John Samson, Windsor; to the Committee on Publication, J. T. Fotheringham, Toronto, and V. Anglin, Kingston; to the Committee on By-laws, J. Wishart, London, and A. McKay, Ingersoll; to the Committee on Ethics, A. A. McKinnon, Guelph, and G. Hodge, London; to the Advisory Committee, Wm. Britton, Toronto.

The report was adopted.

Dr. Samson was then appointed to the chair.

Dr. W. Britton presented the report of the committee appointed to consider the resolution appended to the paper of Dr. Ferguson. It was as follows:

The committee appointed yesterday by the Medical Section to prepare a resolution for submission to the Association on the subject of over-study in the public and high schools of Ontario, and other matters pertaining thereto, beg leave to recommend the adoption of the following resolution:

Inasmuch as the promotion and maintenance of the public health constitutes one of the most important objects for which the Ontario Medical Association was organized, it is submitted that, while fully recognizing

the high standard of general education attained under our provincial school system, it is the opinion of this Association:

1st. That the school children are overworked, to the detriment of their mental and physical health.

2nd. That in many schools the ventilation and air space per pupil are not ample to fulfil the proper sanitary requirements.

3rd. That the lighting of the schoolrooms is often so inadequate or so badly arranged as to induce various forms of visual defect.

4th. That while some provision has been made for physical exercise, there is room for improvement in this respect.

5th. That home studies are, as a rule, made too arduous to allow for such rest and recreation as are essential to physical growth and development.

It is therefore recommended:

1st. That the number of subjects of study prescribed by the Education Department be lessened.

2nd. That home work be curtailed.

3rd. That less exacting examinations be imposed on the pupils.

4th. That more time during school hours be devoted to physical culture.

5th. That school trustees should confer with members of the medical profession as to lighting, ventilation and capacity of schoolrooms.

6th. And that the curriculum generally be framed with full consideration of the paramount necessity for preserving the physical health of the rising generation.

All of which is respectfully submitted.

The resolution was signed by Drs. Britton, Sheard and Ferguson.

Dr. Britton moved the adoption of the report. Dr. Peter Bryce seconded the motion. It carried unanimously.

Dr. Ross, Minister of Education, who was present, was then called upon. He expressed his pleasure at the recommendation made by the Association, and invited the president to appoint a committee to confer with him regarding the points touched upon in the report.

The president named the following gentlemen as members of the committee to confer with the Minister of Education: Drs. R. A. Reeve, A. A. MacDonald, D. G. Wishart, E. J. Barrick, A. McPhedran, J. T. Fotheringham, R. Ferguson, A. McKinnon, C. Sheard, J. Spence, Rowe, G. Gordon, Hutchinson, H. Griffin, P. H. Bryce, G. S. Ryerson, and L. L. Palmer.

The treasurer presented his report, which was adopted.

(See archives for statement of same).

It was moved by Dr. Britton, and seconded by Dr. W. J. Wilson, and resolved:

That this Association deplores the fact that in the various hospitals and dispensaries of the Province, under the guise of poverty, many designing persons who are quite able to pay a medical practitioner at least a moderate sum for his services make false representations as to their financial standing, thereby securing gratuitous care and professional advice or attendance, inflicting a great evil upon the profession at large, imposing upon the time and skill of those who attend them, and obtaining the charitable

consideration which is designed exclusively for the deserving poor; therefore it is further resolved that a representative committee be appointed, consisting of five members from the staffs of as many hospitals, and five chosen from the outside profession, with power to add to their number in the same proportion, whose duty will be to make full enquiry during the coming year as to the extent of the evil, and to report to this Association, at its next annual meeting, their conclusions as to the best means for its suppression.

The resolution was discussed by Drs. Ryerson, Bryce and Fotheringham. Carried.

It was moved by Dr. F. N. G. Starr, and seconded by Dr. T. S. Harrison: That this Association desires to express its willingness to approve of some scheme whereby reciprocity between the provinces may become an accomplished fact, without degradation of the Ontario standard, and that its members in meeting assembled do request that the Ontario Medical Council act in conjunction with the councils of the other provinces with a view to bringing about this happy result.

This was discussed by Drs. Powell, Britton, Ryerson, Cruickshanks and Barrick, and carried.

It was moved by Dr. Barrick, and seconded by Dr. W. J. Wilson: That it be an instruction to the Committee on Papers and Business to take up the report of the legislative and special committees, and resolutions of which notice has been given, immediately after the president's address at the next meeting of the Association.

This motion was discussed by the mover, the seconder, J. F. W. Ross, H. T. Machell, and Bryce. Lost.

Dr. Barrick then gave the following notice of motion:

That, whereas there is reason to believe there is a widespread feeling among the medical men of this Province that the system now in vogue of Lodge and contract practice is undignified and derogatory to the best interest of the profession, and should be abolished.

Be it therefore resolved, that in the opinion of this Association, the medical council be and is hereby memorialized to take a plebiscite on the question of prohibition of Lodge and contract practice,

And further, in case the prohibition be endorsed by a substantial majority, to immediately, or as soon thereafter as possible, apply to the local legislature to have such amendments made to the Medical Act as to put the above in force.

The usual honoraria were then voted to the secretaries.

A letter was read from Dr. C. R. Dickson, president of the American Electro-Therapeutical Association, inviting the members of the Ontario Medical Association to attend the annual meeting to be held in Buffalo in September.

On the motion of Dr. E. H. Adams, all papers unread were taken as read.

Dr. Bruce Smith presented the following report of the Committee on Necrology:—

Your Committee on Necrology beg to report the names of the following members of this Association who have gone over to the majority during

the last year:—Drs. Burns, Strange, Burgess and Closson, of Toronto; Drs. Miller and Shaw, of Hamilton; Dr. Cronyn, of Buffalo; Dr. Dixie, of Springfield; Dr. Newcombe, of Sandwich; Dr. McClure, of Thorold; Dr. Griffin, of Brantford; Dr. Killock, of Perth; Dr. Hill, of Ottawa, and Dr. Cunningham, of Kingston.

The report was adopted.

Dr. Primrose presented the report of the Committee on Publication as follows:—

The Committee on Publication beg to report that in consequence of the fact that during the past few sessions of the Association members have been permitted to part with their papers otherwise than through the Committee on Publication, the members of the Association have not handed their papers to the secretary. The president ruled this morning that all papers should be disposed of through the committee, and that they should be distributed to the various journals. This ruling was, however, too late to affect matters this session, and in consequence the committee have no papers referred to them.

Dr. N. A. Powell presented the report of the Committees on Ethics. It was as follows:—

Your committee beg to report that during the year no formal complaints have been sent in calling for action at our hands.

We recommend that, as the supply of copies of the code of ethics adopted by this Association is now exhausted, an issue be arranged for. The code having received a thorough revision when last before the Association, it is inexpedient to make further changes in it at the present time.

It was moved by Dr. Samson, and seconded by Dr. Harrison, that the sum of seventy-five dollars be donated to the Ontario Medical Library Association in recognition of its usefulness to the profession throughout the Province generally, if the funds of the Association will warrant it. Carried.

The following votes of thanks were then passed:—

It was moved by Dr. Gibson, seconded by Dr. C. R. Dickson, that the thanks of this Association be tendered to the Royal Canadian Yacht Club for the use of their club-house in entertaining the members of the Association.

It was moved by Dr. Dickson, and seconded by Dr. Clouse, that the secretary be instructed to send to the Toronto Street Railway Company the thanks of the Association for their kindness in supplying cars for the excursion about the city. Carried.

A hearty vote of thanks was tendered to the Honorable the Minister of Education for the courtesy manifested in placing once more the handsome rooms of the Education Department at the services of the Association.

The meeting then adjourned until the first Wednesday and Thursday of June, 1899.

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.



EDITOR:
JOHN L. DAVISON, M.D.

ACTING EDITOR:
J. T. FOTHERINGHAM, M.D.

ASSOCIATE EDITORS:

*Surgery:*
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine:*
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology:*
G. P. SYLVESTER, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics:*
CAMPBELL MEYERS, M.D.

*Pathology and Bacteriology:*
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat:*
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D.

*Pædiatrics:*
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M.D.

*Eye and Ear:*
G. STERLING RYERSON, M.D.
C. TROW, M.D.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* The Canada Lancet Publishing Co., 24 Wellington St. W., Toronto.

FRED. H. GRAY, Business Manager.

**The Largest Circulation of any Medical Journal in the Dominion.**


## Editorial.

### A NEW SANATORIUM FOR CONSUMPTIVES.

The following is an outline of a movement now being made by medical practitioners and a few other gentlemen of Toronto to provide a much needed Sanatorium for consumptives within a few miles of the city so that city patients, and those in the vicinity, desiring to take advantage of it may be easily visited therein by their own physician and their friends.

It is the intention to have it near one of the trolley lines which run out of the city, on either of which there are very good elevated sites, and to make it a first-class institution in every respect as relates to general equipment, providing all well recognized modern means for the most scientific treatment of patients, yet on an economical plan.

It is the purpose of the promoters to provide for the poorer classes of patients, and in all stages of the disease, with the hope of checking its progress in cases even considerably advanced in the second stage, as sometimes has been done, and also to provide a home wherein the last days of hopeless sufferers may be relieved of their most distressing symptoms,

and made as comfortable as the resources of modern medicine, including, of course the best of nursing and general care, can make them, and avoiding in this way danger to their relatives and others.

In view of the fact that loss of time in treatment is such an important element in lessening the chances of improvement or recovery, in any stage of phthisis, the disease usually making daily progress, patients, on proper application, will be received into the Sanatorium at once, as in any hospital.

It is purposed to obtain, if possible, a small farm in an elevated, sunny locality, as free from fogs and dampness as possible, in order both to provide ample room for buildings, on the cottage plan, for the different classes of patients and stages of the disease, and also that some of the patients who would be benefited by such exercise may engage in farm and garden work, and so help to provide the institution with the necessary farm and garden food stuffs, including food for cows, poultry, etc.

The promoters feel assured that there is a very general feeling amongst city practitioners and others that such an institution is much needed.

It is a movement in which almost everybody is interested and should feel an interest.

"Who hath not lost a friend" by this most prevalent of all diseases? And not a very large proportion of the community can be individually assured of continued immunity from it.

Not only is it the most common and fatal of diseases, but it demands prompt special treatment, and in a special institution and locality.

With such treatment a larger proportion of consumptives than is commonly supposed can be practically cured.

It is, therefore, believed that a project as above outlined will appeal so strongly to the charitable public of Toronto and its vicinity, that there will not be much difficulty in obtaining the necessary funds to carry it out.

[It will be seen that there is much to be admired in this scheme if it can be carried through. It cannot be a rival to the Gravenhurst Sanitarium, where only specially selected cases can be placed. But it can be a distinct relief to the General Hospitals of the Province, in taking off their hands the more advanced cases from which contagion is apt to occur for other inmates where proper segregation is impossible. We think, too, that with the growing public knowledge of the danger of contagion many cases are likely to be sent there that would otherwise linger at home without the comforts and expert care and nursing that they would receive in such an institution. The gentleman in whose hands the organization of the institution rests is one whose energies have been for years bent to the study of tuberculosis, and whose writings have been most favorably noticed by the leading British and American medical reviewers, as well as in Canada. ED.]

## THE DISCIPLINE COMMITTEE AND ITS LATEST INVESTIGATIONS.

The brilliant young lawyer who writes the leading editorials on bucolic topics for the *Weekly Sun* has seen fit to lend the columns of that bland

and child-like journal to the Munyon Company for the purpose of conducting a campaign against the medical profession in its attempt to shield the public from the conscienceless swindle worked by the Company. When the report of the Discipline Committee has been laid before the Council we shall be glad to let our readers see the exposure made of the methods of this American commercial organization, which we regret to say has found certain holders of the Ontario license willing to lend their influence and protection to what would otherwise be nothing more than a street pedlar's business. Here is one paragraph :—

"It is not, however, to the etiquette of the medical profession or the merits of these cases that we desire to refer. What we wish to call attention to is this fact—that the question as to whether a doctor shall be permitted to pursue his calling in the Province of Ontario is placed in the hands of a body of men, none of whom he has a right to challenge, who may be his personal enemies, who are governed by no legal forms or procedure, and who are responsible neither to the Government nor to the public."

What a touching instance of sympathy for the downtrodden doctor! The outside profession and the public appear in a new rôle here. The quarrel, if quarrel there be, is one that interests no outsider, and interference of such a kind is gratuitous and most impertinent. The columns of the *Weekly Sun* are being utilized to furnish clippings to be inserted at advertising rates as reading-matter in other journals by the Munyon Company. It is a strange comment on the self-respect and conscience of our secular press that the only journal willing to publish a word as to the investigation should be those who have had no advertizing from the Company. None of our readers need to have pointed out to them any of the errors as to fact of the above paragraph. The whole article in the *Sun* is full of similiar bias and untruthfulness. But quacks, and fools for their victims, we shall have with us as long as men remain mortal.

---

## ONTARIO MEDICAL LIBRARY ASSOCIATION.

The annual meeting of the Ontario Medical Library Association was held at Dr. J. E. Graham's, Bloor Street, June 29th, 1898, President Dr. Graham in the chair.

The minutes of the previous meeting were read by Dr. Pepler, Secretary *pro tem.* Treasurer's report read by Dr. Greig.

Curator's report showed the library to have 4,406 complete volumes (bound and unbound) and 27 journals regularly on file. An unusually large number of books have been donated during the year by Drs. Osler, Graham, Sweetnam, Powell, Grasett and others.

Dr. Osler, who was then called upon to address the meeting, began his remarks by mentioning three important points to be remembered in the conducting of a library :

1st. Get as many good journals complete as possible.

2nd. Keep about 100 good journals on file.

3rd. Obtain important new books as fast as they come out.

He spoke of the formation of a Provincial Library, and considered it a good idea where practicable.

Referring to the best way of maintaining a library, he mentioned two systems:

1st. By voluntary subscription.

2nd. By organization of physicians, of which the library is a part.

He considered the latter to be the better plan. He advocated the fusing of the different medical societies, and suggested that an annual payment be made toward the library fund; that this organization should have a proper habitation in some central locality, and that it be called the Medical Chambers.

On behalf of the Association, Dr. Graham then thanked Dr. Osler for his admirable address, and warmly seconded Dr. Osler's suggestion.

The President then announced the retirement of Dr. Greig from the Treasurership.

Dr. Powell then stated that all doctors outside Toronto could have access to any books in the libarary by paying all express charges, subject to required conditions.

Dr. Osler stated that he wished to donate one hundred dollars a year to the library for the purchasing of new books, with the idea of perpetuating the memory of his old preceptor, Dr. Bovell; and he wished this donation to be known as the Bovell Library of the Ontario Medical Library Association.

Dr. Graham then donated five hundred dollars towards an endowment fund.

Moved by Dr. Wishart, seconded by Dr. Machell, that the thanks of the meeting be tendered to Dr. Osler for his valuable subscription. Carried unanimously.

The meeting then adjourned for refreshments.

---

## THE TREATMENT OF INEBRIETY.

A correspondent writes: "An editorial in the last number of THE LANCET contains a statement in reference to the Keeley Company so unfair and unfounded that I am sure you will, on learning the facts, give equal publicity to this correction. It is alleged that the Company have recently 'attempted to get control of the treatment of inebriate prisoners in the county gaols and central prisons of the Province thus arrogating to themselves influence under the aegis of Provincial authority, and securing at the same time a reputation for charitableness.'

Nothing could be further from the truth. When approached on the subject by philanthropic persons interested in the rescue of inebriate prisoners, the Company not only took no action themselves, but deprecated any being taken by their physicians or managers. They stated that if the Ontario Government desired to introduce the Keeley treatment into penal institutions (as has been done in the United States) they would agree thereto, but on condition that its administration should be entrusted

only to the medical officer of the gaol, prison or asylum, and should be restricted to the case of such prisoners as desired treatment, were recommended therefor by the prison authorities, and would agree to repay to the Government a nominal fee to cover the actual cost of the remedies used.

You have doubtless been misled by a paragraph which appeared some weeks ago in certain Toronto papers, based upon statements made to them by a physician connected with the Prisoners' Aid Association. You quote the report of this gentleman, professing to embody the result of an investigation by him into the methods adopted in the United States for the treatment of inebriety. The "true inwardness" of this report is disclosed by its concluding recommendation, "that with a view to both *economy* and *efficiency*. . . . the Ontario Government should be called upon *to appoint an Inspector of Inebriate Hospitals*." (The italics are taken from the report itself as quoted in THE LANCET).

Will it be believed that this impartial and disinterested investigator of "the methods adopted in the United States for the treatment of inebriety" did not visit a single one of the forty or fifty Keeley Institutes scattered all over the Union, in which more patients are to-day being treated for inebriety than in any similar institutions in the world; that he entirely ignores a discovery which within two decades has completely revolutionized the ideas theretofore held by the profession, as well as the public in reference to the status and cure of inebriates which has been officially recognized and adopted by municipal and local authorities, State Legislatures and the United States Government itself, and the permanent efficacy of which is attested by the personal experience of more than 300,000 cured men?

Will it be further believed that, although the statistics contained in his report show the most successful results, (viz., 50 per cent. of satisfactory cures) to have been attained in, the county workhouse of Minneapolis, Minn., among prisoners, most of whom had heretofore been repeatedly "sent down" for drunkenness, he suppresses the fact (of which he was perfectly well aware) that the treatment which produced these results was the Keeley Cure and nothing else?

When, upon the testimony of a witness so unfair and untrustworthy, the Keeley Company are accused of having endeavored, under the guise of charitableness, to secure Government influence (*or Government office*) may they not reply '*Mutato nomine, de te fabula narratur.*'"

[We wish to accept, with certain limitations, the correction suggested by our correspondent, and to say that the Keeley Company would appear not to have approached the Government officially. That the Keeley system of treatment has been urged upon the Central Prison authorities and the Prisoners' Aid Association, as well as on certain members of the Ontario Cabinet, for over a twelvemonth, is still a fact; but it has been so urged not by the consent of the Keeley people here but by a thoroughly disinterested and philanthropic lady in Toronto out of purely humanitarian motives. Our editorial statement was, from our information, correct, as on at least one occasion this lady appeared before the Executive Committee of the Prisoners' Aid Association, accompanied by one of the officials of the

Keeley Institute here, which would certainly lend color to the statement that the Keeley Company was approaching the Prisoners' Aid Association officially. The portion of our correspondent's letter referring to the merits of the Keeley system we print without comment, except to take very strong exception to the statement that the "*discovery*" has "completely revolutionized the ideas theretofore held by the profession in reference to the status and cure of inebriates." The profession has not changed, and will, we trust, never change its attitude of opposition to a cast-iron commercial organization like the one in question.—ED.]

## CANADIAN MEDICAL ASSOCIATION.

Although the attendance at the Ontario Medical Association was good, there are still hundreds of practitioners who have failed to do their duty to the profession and to themselves by appearing this year at a medical society meeting. The correspondence elsewhere printed in this issue is worth noting. A meeting in Quebec will be a treat in every way, apart from the excellence of the papers to be read. Let a word of advice be pardoned. It is this, that at least every other medical man in the Province should arrange now to have a holiday, and to take it in the shape of a water trip to Quebec for the meeting; and let him, above all, preface it by reading Parkman's "Montcalm and Wolfe." If he cannot then with pleasure stand on the citadel and plot out with kindling eye the camps and movements of that stirring time which won Canada for the Empire of which we are so proud, he must be somewhat of a clod.

## THE ONTARIO MEDICAL ASSOCIATION.

The meeting this year was an unusually good one. The attendance was very good, the papers read were of a rather higher standard than usual, and the social element in the proceedings was very enjoyable, thanks to the energy of the committee on arrangements, though we do not select this committee specially for invidious remark. The meeting was of special public interest from the strong resolution passed on the question of pressure in the Schools of the Province. This was apropos both of the President's reference to the subject in his address, and of the paper read by Dr. R. Ferguson of London. It is to be hoped that the committee appointed on the suggestion of the Minister of Education to confer with him may succeed in effecting some easement of the burden laid on the children by the competitive idea which has been allowed to run like a shoddy thread through the whole warp of our boasted educational system, and in fixing the responsibility for our system of cram where it properly belongs. Some of us think that we know that already, and all of us agree that it should cease.

# Communications.

*Editor* CANADA LANCET.

SIR,—There is no man so deserving of a holiday as the hard-working physician who has had his nose to the grind-stone from early morning till late at night. It is not only a privilege but a duty to relax one's energies at least once a year and take an outing. Having made up one's mind to go away for a bit, the next question is where to go, for one likes to gain some mental profit as well as physical vigor. This year the Canadian Medical Association offers peculiar inducements to the busy man by meeting in the historic old city of Quebec on August 17th, 18th and 19th, next. This will give to the physicians all over the Dominion an opportunity to visit at a trifling expense one of the most picturesque parts of Canada. It too will enable the English and French to become better acquainted, thus helping to bring about a more thorough understanding.

The President, Dr. J. M. Beausoleil, of Montreal, is putting forth every effort to make the meeting a success. The local committee of arrangements under the chairmanship of the Vice-president, Dr. C. S. Parke, ably assisted by the local Secretary, Dr. A. Marois, are doing good work toward making the visit of their medical brethren enjoyable. It has been whispered that a trip to Grosse Isle is a probable part of the entertainment. The officers of the Association are confidently looking forward to a large and enthusiastic gathering. For particulars address the Secretary,

F. N. G. Starr,
471 College St., Toronto.

---

*To the Editor of* THE CANADA LANCET, *Toronto.*

DEAR SIR,—It may be interesting to the readers of your Journal, and especially to old Fellows of Trinity Medical School, to hear of Surgeon-Captain B. Hopton Scott, a graduate of Trinity in 1883, and one of the House Surgeons in the T. G. H. in that year, and who has recently returned home under circumstances of peculiar interest and distinction.

Scott, after passing into the Army Medical Service, saw active service in the Chitral expedition, but suffering from ophthalmia, contracted during the North-West frontier war, he returned home on sick leave. Subsequently, in February of this year, he exchanged for service on the West Coast of Africa, proceeding to Port Lokko, on the Sierra Leone river, where, in Major Norris' Company, he received serious injury during an encounter with the natives.

In an account of the affair, *The Times* says: "The medical man accompanying the expedition, Surgeon-Captain Scott, had his leg broken in two places by a shot, besides having a narrow escape when a shot passed across his chest, grazing it. Surgeon-Captain Scott, behaved with great gallantry, for, notwithstanding his own injuries, he continued to attend on the other wounded who were brought to him for that purpose."—*Times*, 9th April.

Captain Scott was invalided home, arriving on the 1st of May, since when he has been in St. Thomas' Hospital, under the care of Mr. Battle. By X-rays the bullet in the leg was located, and afterwards removed. It is an irregular looking bit of metal about ¾th inch in length, roughly cut from ⅜th inch rod iron.

The sciagraph of the femur shows a communicated fracture in its upper third, with splitting of the bone almost to its lowest extremity; there is a good deal of deformity in the line of bone, as the wound received no surgical care for many hours, and the patient was conveyed to the base in a hammock, without any appliance to relieve muscular contraction, and under conditions which Scott himself considered almost hopeless for recovery.

There is now firm union, and the ultimate result will probably be shortening of a little over an inch.

Since treatment in St. Thomas's there have been no unfavorable circumstances, and recovery from these extensive injuries has been uninterrupted, and Captain Scott is in excellent condition.

The conduct of Surgeon-Captain Scott under the severe test to his courage has been recorded by the Surgical Journals here, and cannot fail to be of interest to those who knew him in his student days at the Toronto General Hospital.

I am, yours, etc.,

JAMES M. COCHRANE,
M.D., C.M., Trin. Coll., Toronto,
L.R.C.P., Lond.

10 Weymouth Street,
Portland Place, W.
12th June, 1898.

## Book Reviews.

VOLUME I., SERIES VIII., INTERNATIONAL CLINICS: A quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetrics, Opthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology, and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the leading Medical Colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by Judson Daland, M.D., (Univ. of Penna) Philadelphia; J. Mitchell Bruce, M.D. F.R.C.P., London, England; and David W. Finlay, M.D., F. R C.P., Aberdeen, Scotland. Philadelphia: J. P. Lippincott Company, 1898 (Copyright, 1898).

This volume of 365 pages, with twelve plates, contains thirty nine articles by well known clinicians on various topics in Medicine, Surgery, Drugs and Remedial Agents, Treatment, Neurology, Gynæcology and Obstetrics, Ophthalmology, Laryngology, Rhinology and Dermatology.

The editors evidently have had in view the collection of a series of lectures on subjects of the greatest practical importance, covering the widest field of medical art, by authors competent to speak with authority in their various departments. In this object we think they have succeeded. The work, truly international as it is, will prove very useful, and of especial interest, by placing at one's disposal the views on important current topics of leaders of medical thought in widely separated medical centres of the world. Without reviewing in detail the different lectures we refrain from individualizing, but that by Prof. E. Von Leyden on Myocarditis we read with particular pleasure. We believe these clinical lectures will be especially valuable to the general practitioner.

# PUBLISHERS' DEPARTMENT.

The twelfth annual class for instruction in orificial surgery will assemble in Chicago at 9 a.m., Monday, September 5, 1898, and will continue to meet daily during the week, as usual.

For particulars of this clinical course, address:

E. H. PRATT, M.D.
100 State St., Chicago.

Las Vegas, one of the best health resorts, possesses certain negative virtues. It has no malaria; hay fever is unknown; epidemics of acute intestinal diseases never occur; there are no hot nights and no sultry days. Neither need one contemplate from afar the possible fatigue of a journey. Las Vegas Hot Springs is less than two days' ride by rail from Chicago and St. Louis, and trains carrying palace sleeping cars and reclining chair cars pass Las Vegas daily, affording comfort-ensuring facilities. Round trip tickets to Las Vegas Hot Springs at greatly reduced rates may be purchased—particulars obtainable of any Santa Fe Route agent.

THE HARD RUBBER TRUSS.—As now manufactured, it would be hard to find a single fault in it. The best trusses of this kind, "Seeley's," are manufactured by Messrs. Chesterman and Streeter of Philadelphia, for whom Messrs. Hargreaves Bros., 162 Queen St. West, are agents for Canada. Seeley's trusses come from the largest and oldest establishment on this continent for the mechanical treatment of hernia, and have enjoyed the confidence of the profession for almost 40 years.

Among the many advantages possessed by these trusses might be mentioned the following: The springs are of the finest steel, especially prepared for the purpose in Sheffield, England; shaped under personal directions and highly tempered; covered with highly-polished hard rubber, they are impervious to moisture, used in bathing, and, fitting perfectly to shape of body, may be worn without inconvenience by the youngest child, most delicate female, or the laboring man, with perfect comfort and safety.

The pads are hollow (or shell-like), yet extremely strong, and made in many different shapes and sizes, to meet anatomically all of the various locations and forms of rupture.

These trusses, being unaffected by perspiration, are easily kept clean, avoiding all sour, sweaty, chafing unpleasantness, and, while extremely light, the worst form of hernia or rupture will be held permanently, thereby causing a radical cure where cure is possible by any means.

The springs permanently retain their elasticity, are always reliable, and very durable.

Messrs. Hargreaves Bros., 162 Queen St. West, Toronto, carry a full assortment of the Seeley goods in stock, and will be glad to send to all

who will ask it full information and literature on the mechanical treatment of hernia.

---

The Gleason Sanitarium at Elmira, New York, now under the immediate medical direction of Dr. John C. Fisher (who is well-known to many of our readers as the former physician in charge of the Warsaw Salt Baths), comes to us most highly recommended by a successful career of forty-eight years, as well as a guarantee of its worth furnished by the presence of Dr. Fisher as its medical head.

The Sanitarium has recently been partially rebuilt and entirely refitted; has large and commodious bath and treatment rooms, and is thoroughly equipped with all the sanitarium appliances of the age, among which are Turkish, Russian and Roman baths, static electricity and brine baths. These baths are especially helpful in rheumatic troubles, and are given by skilled attendants and under the immediate supervision of Dr. Fisher.

The management of THE LANCET would be glad to answer letters of inquiry relative to the Sanitarium, or to forward printed matter descriptive of it.

---

A SHEET ANCHOR.—On September 10th, 1897, a well-known New York physician of the Third Avenue Cable Railroad Company, returned to the New York office of the Norwich Pharmacal Co., ninety-four one-pound empty Unguentine jars. In a letter accompanying the jars, the doctor says: "The jars I return to you represent the number of pounds of Unguentine I have used since December 1st last. I have from twelve to fifteen cases a day, motormen, conductors, and stablemen, suffering from slight wounds, abrasions, cuts, bruises and burns, and about the only treatment I make is to give them a small box of Unguentine. It is certainly my sheet anchor in practice, as in every instance it heals all the above cases quicker than anything I have ever used."

---

WAMPOLE'S ANTISEPTIC SOLUTION, entitled FORMOLID, is *superlatively* a germicide and antiseptic. In the formula are embodied Formaldehyde, Acetanilid, Boroglyceride, Sodium Benzo-Borate, Eucalyptol, Thymol, Menthol, Ol. Gaultheria, Alcohol, Witch-Hazel. It is absolutely non-irritant and non-poisonous, therefore may be used externally wherever an effective germicide and antiseptic is desired internally, in fermentative dyspepsia, fetid, choleraic and other diarrhœas; in typhoid, as an intestinal antiseptic. A sample and descriptive circular will be sent free of cost upon application. Address Messrs. Henry K. Wampole & Co., Philadelphia.

---

SUMMER DIARRHŒA.—In the large class of summer diarrhœas of children and adults, with griping in the bowels and flatulence, the use of Listerine, in doses varying from ten drops to a teaspoonful (with or without water), has a most salutary and pleasing effect.

It can be administered at short intervals after eating, as soon as regurgitation, distension or acidity occurs. Its action in arresting excessive

# The Canada Lancet.

VOL. XXX.] TORONTO, AUGUST, 1898. [No. 12.

## ORIGINAL ARTICLES AND COMMUNICATIONS.

### SOME POINTS IN THE DIAGNOSIS OF MORPHIA ADDICTION.

BY STEPHEN LETT, M.D., M. C. P. & S. ONT.,

Medical Superintendent of the Homewood Retreat, Guelph, Ont.

The far-reaching and important factor of being able to make an absolute diagnosis in cases of suspected morphia addiction is of such moment that any possible light on the subject should receive publication. The malady is frequently a secret one—known only to the unfortunate habitué, who uses every possible means to keep the fact hidden from nearest friends and relatives, as well as the medical adviser, until dire necessity compels an acknowledgment of that which has been so long withheld at the cost of exquisite physical and mental torture and ruin to the general health. The importance of a correct diagnosis is further manifest in many medico-legal cases; errors have led to serious results—inflicting injustice, undeserved penalties, and even sacrifice of life, when a correct diagnosis would have averted these catastrophies.

I am pleased to find that Dr. Mattison, medical director of the Brooklyn Home for Habitués, has in the *Quarterly Journal of Inebriety*, Vol. XX., No. 2, page 203, directed attention to this matter, and ably presents the subject, as witnessed by myself and others engaged in the special line of treating cases of narcotic addiction. Dr. Mattison, in the same article, points out the way to a diagnosis in the following words:—

"The detection of morphinism in women need never be difficult. We have infallible means to decide it. Two tests place the diagnosis beyond doubt. One is urinary analysis: the other, enforced abstinence. The latter is the better. The former is best made by the Bartley process—Dr. E. H. Bartley, Professor of Chemistry, L. I. College Hospital. There are other methods, but they are complex. This is simple and sure. It is: Make suspected urine alkaline with carbonate of soda. To this add one-fourth its volume of chloroform or amylic alcohol. Shake well, allow to settle, draw off the chloroform and add a small amount of iodic acid. If morphia be present a violet tinge will be noted. The other test suggests itself. Forced abstinence from morphia for forty-eight hours will surely give rise to reflex symptoms due to opiate need, and settle habitual taking beyond dispute."

I was of Dr. Mattison's opinion until recent experience proved to me that the means of diagnosis above suggested are open to grave errors which might lead to most serious results. Doubtless there are many cases in which a correct diagnosis may be made by one or other or both the tests he has so advantageously published. Yet there are instances where they will prove to be fallacious.

Take the physiological test of enforced abstinence for forty-eight hours. It is not always possible to have the suspected person placed in such a position, surrounded by the proper safeguards, and have the necessary espionage exercised to prevent the possibility of clandestine morphia-taking. Supposing, however, this supervision possible, the patient might have been addicted to some other drug—cocaine, phosphorus, paraldehyde chloral, etc., or even alcohol; the sudden and protracted deprivation of the accustomed drug would be followed by a train of symptoms so closely allied to those consequent upon the sudden withdrawal of morphia that it would require a very acute diagnostician to make a diagnosis that could not be called in question.

By means of the science of chemistry there is at our command a surer and better method. Urine can always be obtained from the suspected person, and a proper analysis of it will reveal the presence or absence of morphia. The Bartley mode of testing the urine, as set forth by Dr. Mattison, is open to error, for not only have I proved that the iodic acid and chloroform reaction test can be obtained with some urines in which I have absolute certainty no morphia exists, as evidenced by the source from which it was obtained, as well as by chemical analysis hereafter described, but also have had negative results by the Bartley test with urine voided by a patient known to be taking two and three-quarters of a grain morphia sulph. in twenty-four hours that, unless very critically examined, it was impossible to say any reaction had taken place, and yet a sample of this latter urine treated by the method hereinafter described unmistakably reacted to the iodic acid and chloroform test.

Upon these facts we are forced to the conclusion that some urines contain a substance or substances which unless separated before the final test is made will give a reaction the same as morphia; and that in some persons taking below three grains of morphia in twenty-four hours the Bartley test is not reliable.

The urines which, I am absolutely sure, contained no morphia, gave with the Bartley test a very positive reaction, and beyond a slight excess of uric acid in my own case, the persons from whom other specimens were obtained are in perfect health. I may further add that the uric acid separated from my urine when acidulated with hydrochloric acid, the uric acid collected in a filter and well washed, gave the reaction with iodic acid and chloroform. The question whether this is entirely due to the uric acid or some adherent substance has as yet not been determined, this together with the isolation of any other substance causing the reaction is reserved for further investigation now in progress.

The method I recommend for the detection of morphia in the urine is as follows:

Collect about twenty ounces (less will do) of the suspected urine. If

it has not an acid reaction acidulate with dilute hydrochloric acid until it reddens blue litmus. Concentrate to about three ounces and let stand in a cool place for twelve hours, then filter. To the filtrate add sufficient carbonate of sodium to render it alkaline and let it stand for twelve hours, then filter and collect the precipitate, wash this with distilled water made slightly alkaline by carbonate of sodium and dry. Digest the dried precipitate with pure alcohol at a gentle heat and filter, evaporate the filtrate to dryness, dissolve the residue with dilute sulphuric acid, and test for morphia by the iodic acid or other well-known tests for morphia salts.

By the above method I have succeeded in obtaining morphia sulphate from the urines of persons taking very minute amounts of the drug, and have been able to identify the crystals by means of the microscope, when the Bartley test failed.

---

## ECZEMA SEBORRHŒICUM.

BY WM. NELSON, M.D.C.M., DERMATOLOGIST TO THE METROPOLITAN DISPENSARY, MONTREAL.

(Read before the Montreal Medico-Chirurgical Society, May 23rd, 1898.)

Many years ago Willan and Bateman described a serpiginous, papular-edged, ringed eruption, limited to the trunk, and called it "Lichen Circumscriptus." Afterwards, at the Blackfriars Skin Hospital and elsewhere, it became familiarly known as "Flannel-rash." Still later, Duhring noticed that the trunk eruption was always preceded or accompanied by a so-called seborrhœa of the scalp, and he re-christened it "Seborrhœa Corporis." This clinical observation of Duhring's attracted Unna's attention, and he, with characteristic energy, set about a thorough microscopical and clinical study of the process, the results of which he gave to the profession at the International Medical Congress of 1887. His views, of course, did not receive anything like universal acceptance, but among the few who recognized that Unna had brought to light the greater portion of a great truth was that brilliant dermatologist, G. T. Elliott, of New York. It was my privilege during the years 1889 90 to watch the latter's work as carried on in the New York Skin and Cancer Hospital, and this paper will epitomize what I then learned, what I have since gathered from his writings, and what my own experience has taught me.

Eczema seborrhœicum or dematitis seborrhœica embraces a number of clinical manifestations that formerly were looked upon as distinct diseases, but which are now known to be simply so many phases of one and the same process; thus, seborrhœa sicca, seborrhœa corporis, pityriasis capitis, faciei and barbæ, alopecia pityrodes, and many cases of so-called psoriasis and syphilis represent nothing more than different grades of the process first described by Unna.

The process is a parasitic, catarrhal inflammation of the skin that primarily attacks the scalp, where it may remain localized for an indefi-

nite period. More often it extends behind the ears and a little below the margin of the hair upon the forehead, or appears in the interpalpebral space and beside the alæ of the nose. Very often the disease skips the face and shows itself upon the middle of the sternum and between the shoulders (seborrhœa corporis of Duhring), or the groin, axillæ, umbilicus or areolæ of breasts may be attacked. No portion of the body is altogether exempt—not even the palms and soles—but the before-mentioned regions are those for which the disease has a preference.

In this paper I will not touch upon the disease as it appears when superimposed upon or complicated by other morbid conditions such as eczema, syphilis or psoriasis.

The clinical appearances vary according to the intensity and position of the process. The earliest and slightest grade is represented by more or less branny or greasy scaling—the latter occurring when a seborrhœa oleosa exists; the skin may be normal as to color, or slightly reddened. The subjective symptoms are not marked, consisting only of slight itching and a sensation of flushing of the part when the patient is heated. This is the condition so often met with on the scalp, and which has had so many christenings. The next step is characterized by the appearance of sharply defined macules of various dimensions and colors, the most common tints being those of salmon-yellow or raw-ham. These macules may become the seat of thick, greasy crusts, which in appearance and to the touch are not unlike common yellow soap (seborrhœa cerea). A higher grade of severity is manifested by groups of small papules, dark-red in color, and often capped with scales. These papules increase in size and number, coalesce and form a papulo-squamous patch, which soon clears in the centre, leaving a papular-edged, ringed lesion enclosing a yellow scaly centre. The union of a number of these lesions gives rise to crescentic, gyrate and wreath-like figures. The trefoil so often seen upon the chest and the scallop, extending from hairy margin of forehead, are good examples of what is produced by the coalescence of these different lesions. The greatest intensity of the disease is represented by some of the lesions mentioned plus more or less vivid redness, weeping and crusting, but the accompanying infiltration is always very slight as compared with that of simple eczema.

Pathologically the disease is a catarrhal inflammation of the skin, the depth and area of the inflammatory infiltration being in proportion to the intensity of the process. In the milder forms represented clinically by more or less scaling there is found a slight infiltration about the papillary vessels and ascending branches of the subpapillary plexus. In the more intense grades the whole cutis may be involved in the inflammatory process. While the microscope reveals nothing absolutely distinctive, it most certainly does away with the old belief that the sebaceous glands are primarily and almost exclusively the seat of the morbid processes that produce the manifestations known as the seborrhœas. The sebaceous glands have been found to be normal in appearance and to take an even stain with osmic acid, and no one has been able to demonstrate an incomplete metamorphosis of their cells. The presence or absence of fatty scales or crusts depends upon the existence or non-exis-

tence of a seborrhœa oleosa, the degree of hyperplasia of the horny lining of the follicular duct, and the completeness or incompleteness of the keratinization of the horny layer.

Etiology.—The disease is met with at all ages, but the period between 15 and 35 is that during which the greater number of cases are developed. The sexes are probably equally liable, but women more often seek relief.

Heat and moisture favor development and extension, and therefore we meet with the disease most frequently in those who perspire freely, who wear tight-fitting, close-textured hats and caps, who often wet the hair and scalp with plain water, who pass through the barber's hands and fail to disinfect the head afterwards, and, lastly, those who are brought into close personal contact with individuals in whom the disease already exists. It has been repeatedly observed that the marriage of a person possessing a healthy scalp and skin with one suffering from even the milder grade of the disease (dry dandruff, for instance) may be followed by the more or less rapid infection of the healthy partner.

Unna claims that he has found a mulberry coccus constantly present in the diseased tissues and that inoculations with it produce vesiculation, redness and subsequent baldness. Sabouraud fathers the statement that the micro-organism of seborrhœic eczema is the same as that of alopecia areata. These claims have received no corroboration.

The recognition and proper treatment of eczema seborrhœicum are of very considerable importance, not only because of the disfigurement or discomfort incidental to its different grades, but also for the very good reason that it, and it alone, is responsible for over 80% of all cases of premature baldness. Elliott's analysis of 234 consecutive cases of alopecia prematura, met with in private practice, is as follows:

| | | |
|---|---|---|
| Alopecia Areata | 8 | |
| Congestion of brain | 1 | |
| Excessive intellectual work | 4 | |
| Syphilis | 2 | |
| Prolonged neuralgia | 3 | |
| Anæmia, neurasthenia and debility | 3 | |
| Scarlatina and Typhoid fever | 4 | |
| Idiopathic | 2 | |
| Alopecia from purely local causes | 207 | or 88.46% |
| | 243 | |

Every one of these 207 cases due to purely local causes manifested some grade of eczema seborrhœicum, *i.e.*, the clinical phenomena were such as were known as pityriasis capitis, alopecia pityrodes and seborrhœa sicca, or, progression to a higher intensity having taken place, there were associated with the appearances mentioned more or less extensive areas or circumscribed patches of redness covered with scales or crusts, and often presenting evidences of weeping. The majority of cases displayed only the symptoms belonging to alopecia pityrodes and seborrhœa sicca, but many had, in addition to scalp symptoms, manifestations of the disease

upon some other portion of the body. Another interesting fact was that in 164 out of the 207 cases the patients were between the ages of 20 and 40.*

The treatment of the uncomplicated disease is entirely local and, as a rule, satisfactory; especially is this so in regard to the body emption. The malady at its primary seat—the scalp—is more resistant, and usually requires some perseverance in order to eradicate it; not only this, but as one attack leaves the skin of this part peculiarly liable to another, and the possible sources of infection being innumerable, a prophylactic should be used indefinitely.

The classic remedies for eczematous conditions are of little or no benefit, and in the treatment of the scalp the time-honored tonic and stimulant applications are worse than useless. Two drugs exert a special influence upon the disease, viz.: Sulphur and resorcin, and they may be used singly or in combination. The mercurials, with the exception of the oleate, are of little value, and the latter gives its best results in cases of long standing and when the eczematous element predominates.

A brief outline of the routine treatment I have found most satisfactory may not be out of place, and is about as follows:

1st. Of the disease on non-hairy surfaces:—All scales and crusts are to be removed by washing with spirits of soft soap, or, if the part be tender, by the application of salicylated oil. Then any one of the following may be used: Sulphur ointment alone, or with 3% to 5% of resorcin added; Borophenyl ointment 10%, or thymol 4%. A more elegant way of applying these remedies is by means of Bassorin Varnish or Pick's Jelly, the formulæ for which are:

Bassorin 48.0, dextrin 25, glycerin 10, aq. ad 100.0. Sig.: Bassorin Varnish. Gum tragacanth 5.0, glycerin 2.0, aq. ad 100.0. Sig.: Pick's Jelly.

These, when spread upon the skin, dry quickly and leave a film that excludes the air, keeps the drug in close contact with the diseased surface, and is easily washed off.

2nd. Of the disease as met with on hairy surfaces: that of the scalp being taken as the type and acute conditions ignored. The head should be shampooed once or twice a week, not by a barber, but by the patient. Green soap is the best for this purpose, the disagreeable odor being disguised by dissolving it in Eau de Cologne or white spirits of lavender. Any of the ointments already mentioned may be used, or, an oleate of mercury cream, the strength of which may be from 2½% to 10%. In the majority of cases, however, lotions are preferable, and they are especially so in treating the scalps of women and those who wear long hair. One containing 3% to 10% of resorcin in equal parts of alcohol and water is of good general service. More elegant preparations that are prophylactic and curative can be made use of as toilet articles.

In using ointments or creams on the head the hair should be parted and the selected dressing rubbed into the scalp with the finger-tips, as it is the skin and not the hair that requires treatment. A good method of applying lotions to long-haired scalps is found in the use of the ordinary

* *New York Med. Jour.*, Feby. 4th, 1893.

medicine dropper, the nozzle of which can be pushed through the hair down to the skin before the bulb is compressed. In this way the whole scalp can be gone over without wetting the hair to any appreciable extent.

29 McGill College Avenue, Montreal.

---

## ABDOMINAL PREGNANCY.

BY S. H. LARGE, M.D., CLARKSBURG, ONT.

Mrs. H., age 36. Family history, good. Personal history, has had two children and two miscarriages, both at the fifth month. Menstruation has been regular ever since the age of fifteen. She has had very good health up to the present.

I am indebted to Dr. Hurlburt, of Thornbury, for the following history: I was called to see Mrs. H. on Sept. 28th, 1897; found her suffering from pain all over the abdomen, especially severe in the region of the liver. Pulse 90. Temperature 99. Had been vomiting. Menses regular. Bowels constipated. Found she had been treated for gall-stones by former physician. Applied mustard over stomach. Gave 1/10 gr. each calomel, cocaine, and morphine, with 3 grs. bismuth, every hour for 12 doses, then Rochelle until bowels were moved.

Examination per vaginam.

Os patulous. Right tube enlarged and very tender. Applied to uterus belladonna and glycerine, and painted tr. iodine over right side. Heard in a few days that she was up and doing her work.

On January 2nd, 1898, she was seized with violent pain in right iliac region. Dr. Hurlburt and I saw her together. Temperature normal. Pulse 110.

Examination per vaginam. The os was normal, and the uterus was empty on passing the sound; there was a distinct tumor on right side which was very tender. We diagnosed abdominal pregnancy, and decided to operate the following morning.

On January 3rd we found that she had had a very bad night, and the pain had been very severe; the abdomen was greatly distended and very tympanitic. Pulse 120, and very thready. Extremities cold. Temperature normal, and it looked as if the sac had ruptured.

Gave her 1/30 gr. strychnine hypodermically, and then gave her an anæsthetic, using the A.C.E. Mixture. After she was thoroughly under the influence of the anæsthetic we made a thorough examination of the interior of the uterus and found it empty.

Operation. Preparation of operating room. All articles of furniture, curtains, and mats were removed from the dining-room, and carbolic acid was burnt on coals, also a tin of carbolic acid and water was put on the stove and allowed to boil. The operation was done on the kitchen table.

Preparation of patient. A dose of Rochelle salts was given the night before, and the abdomen was washed with antiseptic soap and ether, and

then bichloride. Towels were boiled and placed around abdomen. Instruments were boiled and put into a solution of carbolic acid.

After making hands aseptic, an incision four inches long was made in the median line; after cutting through the skin and integuments, and after all hemorrhage had been arrested by artery forceps, the peritoneum was picked up between two forceps and cut between; the finger was then used as a guide and the opening enlarged with scissors. On digital examination a five months' fœtus was found lying amongst the bowels, and there were also a great number of clots and quite a quantity of serous fluid, showing that the sac had ruptured. The fœtus was removed through the opening. On examining the placenta it was found to be quite adherent and was separated with great difficulty, and there was very severe hemorrhage, which was controlled by boiled hot water and artery forceps. The cavity was then packed with iodoform gauze for a few moments, and on removal it was found that all hemorrhage had ceased. After drying the cavity with prepared lint a drainage tube was inserted, and the peritoneum was brought together with silk. then the muscles and skin with silkworm gut and a dressing of boracic acid and iodoform, absorbent and gauze, and a many-tailed bandage.

The patient was very weak after the operation, but on giving her strychnine hypodermically, and brandy per rectum, she revived. We would have given her an intra venous injection of salt solution but did not have the appliances with us. Her diet after the operation was brandy, milk, egg albumen, and beef juice, that is, beef just warmed and then squeezed.

She made a good recovery, and she now wears an abdominal silk belt and is going around.

The temperature on the fourth day went up to 100, but when the bowels were moved it went down to 99.

I would like to enumerate some of the many difficulties a country surgeon has to contend against:

1. The patient was nine miles from our office.

2. Country people have a great abhorrence of an operation, and if you do an operation and it terminates fatally you are done for in that locality.

3. It is impossible to have trained nurses, as nine times out of ten operations have to be done in poor families, and they are unable to get them. We had two neighbor women assisting us. You have to act as nurse, generally, yourself.

4. It is very hard to get country people to go to a hospital; they think when you mention hospital to them that their time has come, and will start to make preparation for the "great beyond."

Generally the places you have to operate in are not very aseptic, and it is a wonder sometimes how they escape septic trouble.

# Communications.

## TREATMENT OF INEBRIATES.

To the Editor of the Canada Lancet:

Sir,—In the June number of the Lancet you publish a letter in which I am criticized for not favoring the Keeley method of treating inebriates, for not visiting Keeley Institutes in the United States, for recommending the utilization of local hospitals for the treatment of inebriates, and also for suggesting the appointment by the Government of an inspector of inebriate institutions.

From the character and tone of this communication it is very evident that it was neither written by a medical man nor by a Canadian, and that the writer is more concerned for the interests of the company controlling certain proprietary remedies than for the interests of the unfortunate inebriate.

Although a reply seems almost superfluous under the circumstances, it may possibly serve a useful purpose, if, with your kind permission, I should state some of my reasons for not favoring the Keeley treatment.

A little over a year ago a lady called upon me to secure my interest in the Keeley treatment for inebriate prisoners. She was fortified with a number of documents and publications that placed the Keeley treatment in a most favorable light. I was so well impressed with her presentation of the case that I took some trouble to have her name placed on the programme for a paper to be read on the subject before the National Conference of Charities and Correction which met in Toronto in July last, notwithstanding that the programme had already been arranged for. I spoke favorably of the Keeley treatment to a member of the Ontario Government, to the Inspector of Prisons, as well as to the members of the Prisoners' Aid Association.

During this time I accepted the statistics furnished me as trustworthy. After a careful investigation, however, I was forced to the conclusion that if not absolutely inaccurate, they were at least misleading. For instance, it is claimed that by the introduction of the Keeley treatment in the branches of the U.S. Military Homes for Disabled Volunteer Soldiers, from 80% to 90% of those taking treatment for inebriety are permanently cured of their inebriety. I have letters from three of the surgeons of these branches. The first stated that the Keeley treatment was never used in the Home with which he was connected, as they found other treatment quite as effective. The other surgeons state that although the environment of the soldiers in these Homes was most favorable to reformation while taking the Keeley treatment, special privileges being granted to Keeley "graduates," yet not more than from 20% to 25% appear to be permanently reformed. One of these surgeons puts the proportion of "cures" at 25%, and the other at only 20%.

I also found that at the Washingtonian Home, Boston, during the last

few years fully 50% of the patients have taken some form of "Gold Cure" treatment, and at the Walnut Lodge Hospital, Hartford, these cases amounted to 70%, while 50% have taken the Keeley Gold Cure; some of these have taken the "Keeley Cure" several times.

While on a visit to the Massachusetts Reformatory for Women last winter, I asked the lady superintendent if she had had any experience with, or knowledge of, the Keeley treatment. Her reply was to the effect that from what she had seen of the results of the treatment it was far from being satisfactory. I put the same question to the secretary of the Massachusetts Prison Association. He said, "I have known scores to take the 'Keeley Cure,' but I know of only one case where the cure was permanent." On the other hand, on asking the secretary of the New York Prison Association the same question he said, in effect, "The Keeley cure is all right, but the treatment of Dr. ——. of ——, Ont., is quite as good. Don't bother about the Keeley treatment."

The Rev. Dr. Buckley, editor of the *Christian Advocate*, New York, through physicians and clergymen, obtained the results of treatment of 534 cases of inebriety in "Keeley Institutes." Of these, 251 relapsed within the comparatively short period of nine months, 13 became insane, 11 died and 2 committed suicide.

Your correspondent finds fault with me for not visiting "Keeley Institutes" in the United States. I went where I had reason to believe I could obtain reliable information, and I was not disappointed. I saw Dr. Lett of Guelph, Dr. Crothers of Hartford, Conn., Dr. L. D. Mason of Brooklyn, Dr. Hutchison of Foxboro, Mass., and Dr. Ellsworth of Boston. These gentleman have attained an eminent position in their specialty and they have made valuable contributions to the literature of the inebriety question, and, moreover, their practice is in accordance with the tenets of legitimate medicine. I did, indeed, visit the "Keeley Institute" in Toronto, as well as two other so-called "Gold Cures," one in Canada and one in the United States, and although I was most courteously treated by the gentlemen in charge of these institutions, the amount of scientific information vouchsafed could be put in a very small compass. As already intimated, I had correspondence with the Keeley Company at Dwight, Illinois, and I had the Keeley literature and their so-called statistics placed at my disposal.

Under these circumstances I fail to see any advantage in visiting the individual "Institutes." I intended visiting some of the United States Military Homes where the Keeley treatment had been in operation, but I ascertained that the Keeley treatment had been abandoned in all these Soldiers' Homes, and that representatives of the Keeley Company or Keeley Institutes had been prohibited giving treatment to the inmates of these Military Homes. I may say that I obtained this information from the "Report of the Board of Managers of the National Home for Disabled Volunteer Soldiers," 1897, page 194. The publication was kindly sent me by Gen. W. B. Franklin of Hartford, Conn., the President of the Board. This does not look like an endorsation of the "Keeley Cure" by the United States Government. I may add here that I also failed to find that the Keeley treatment is in use in any penal institution anywhere, although the Keeley Company claim that such is the case.

I am, on principle, opposed to the adoption of proprietary remedies, but notwithstanding this, had I found that the representations of the Keeley Company could be substantiated, that the remedies were harmless, that their statistics were reliable, and that 80 or 90 per cent. of their "graduates" abstained permanently from intoxicants, I would have felt it to be my duty, in the interests of humanity, to report favorably to the adoption of the Keeley treatment for the relief of pauper inebriates and inebriate prisoners. For seven or eight years the Prisoners' Aid Association has been urging the Ontario Government to establish one or more Reformatories for inebriates, but the Government hesitates to do this on account of the very large expenditure necessary both for buildings and for maintenance. It can readily be seen that this expenditure would be avoided if 80 per cent. or 90 per cent. of prisoners and paupers can be permanently cured by a course of four or five weeks' treatment.

Unhappily no treatment has as yet been devised that can effect such a desirable reformation. Had I found that the "Keeley Cure" could accomplish this, I would gladly hold up both hands for its immediate adoption, notwithstanding the fact that—as stated to the Prisoners' Aid Association by a representative of the Toronto "Keeley Institute"—the minimum charge would be $30 per patient.

Yours, etc., etc.,

A. M. ROSEBRUGH.

---

[This letter must close the discussion in these columns. The subject is important but does not come properly within the sphere of the CANADA LANCET, and would make too great demands upon our space.—ED.]

---

## ON THE TREATMENT OF CONSUMPTION.

TO THE EDITOR OF THE CANADA LANCET.

SIR,—When we think of the many points which must be considered, the many indications in the treatment of consumption, the indispensable outdoor or pure air, the special diet, the needs of the skin, the degree of fever, and nature and amount of exercise required, etc., the absurdity of certain physicians "coming out," one every few months or weeks, with a new "cure," is very striking.

Almost every case of consumption, even in the second stage, will recover if we can properly and practically meet all the indications suggested by the various symptoms in each individual case, without any specific or special new cure whatever.

Almost every physician of a few years' practice has been surprised to find an advanced case get better and practically well, when he has had no hope of such result. Amongst the multitudes of remedies long known, hygienic and other, certain ones had been prescribed which just met the particular requirements and conditions of the case; while the patient had been a "good" one, and able to carry them out, as prescribed, which very few are able to do.

And it is just here that nearly the whole secret of "cure" lies, and of what would be the recovery of a large proportion of consumptives who now die on our hands, or, alas! far from home, when they should have remained in Canada where already acclimatized.

However long close and careful the examination and after-study of each particular case by the consulted physician, of the whole history and the precise present condition of all the various physiological functions: the amount of air breathed, the remaining digestive, and especially assimilative powers, and the condition of the skin, between which, *i.e.*, the oxygen inspired, the food assimilation, and the skin function there is such close relationship; the study of the patient's strength and temperature, as bearing upon the exercise to be recommended, whether active or passive, etc; of the extent of the pre-bacillary auto-intoxication, the after self-infection and the present virulency of the bacillary action, and of numerous other points. And however well the many indications may be now met by the physician in his detailed advice in all the special points of treatment for this particular case, the great difficulty now usually looms up.

Is the patient in a position, have he and his friends the intelligence, the possible facilities or means, to have the advice of the physician properly carried out in the necessary detail? Can he keep out in the open air all day and be practically or almost so at night, by proper ventilation of the bedroom? Can he carry out rules for increasing the air or oxygen supply in the blood and tissues—the super-respiration now required—the lung gymnastics if necessary, or other means of supplying a sufficiency of oxygen? Can he command the proper food? Or the proper tempered baths in suitable form? Or the massage or extremity movements if passive exercise be advisable? Will the special medication for special troublesome, wearing-out symptoms be properly attended to?

In not one case in ten can these questions be safely answered in the affirmative.

When we shall have learned clearly that, as shown many years ago in a pamphlet on my own collective investigations in respect to the chest measurement of consumptives, and much more recently by Dr. J. E. Squire, Physician to the North London Hospital for Consumption, that those patients, in the "early stage," breathe only about one-third as much air as average persons in health, learned that this hypo-respiration is the cause of the disease and that the bacillus is *post-hoc* (although later becoming virulent and a more or less active infection) more attention will then be given to an increased oxygen supply in the diseased body, in some form, as the first and indispensable remedy, and less to new cures and fads.

Already we have learned that phthisical patients can be properly treated only in special sanatoria or hospitals.

It now remains for us to endeavor to have these provided.

Yours, &c.,

Edward Playter.

# MEDICINE.

IN CHARGE OF

N. A. POWELL, M.D.,

Professor of Medical Jurisprudence and Lecturer on Clinical Surgery, Trinity Medical College; Surgeon to the Hospital for Sick Children, and to the Extern Department Toronto General Hospital; Professor of Surgery, Ontario Medical College for Women. 167 College St.; and

WILLIAM BRITTON, M.D., 17 Isabella Street.

## THE HOSPITAL TREATMENT OF CONSUMPTION.

BY JAMES E. POLLOCK, M.D., F.R.C.P.,

Consulting Physician to the Hospital for Consumption, etc., Brompton.

It is well known that fifty years ago consumptive cases were excluded from the general hospitals, not that there was any idea that the disease might be communicated by contagion, but that its hopeless nature and prolonged course in most cases would uselessly occupy space in hospitals which ought to be devoted to the care of curable affections. This it was which mainly led to the foundation of the Brompton Hospital, in order that, whether curable or not, a refuge might be found for a very large class of sufferers from a pitiable disease. The great prevalence of the disease among all classes largely excited a humane desire for its relief, and a yearly increasing response was made in money to the appeals of a small committee, till now £24,000 per annum is found from several sources, which provides 231 beds, and supply advice and medicine to some 13,000 out-patients annually. The proposal for its foundation emanated from a few charitable laymen with no interests to consider except the relief of much suffering; but, strange to say, it met with very decided opposition from the heads of the profession. Watson and Sir James Clark were against it, and it may be said that, with the exception of Williams, Walshe, and John Forbes, the rest of the profession discountenanced the idea of a special hospital. Those three boldly accepted office as consulting physicians, although Walshe alone ever treated any patients at Brompton. For a time he took charge of an out-patient department. In looking back to that time it is plain that there existed a fear that quackery would arise from the fact that some of the staff might assume a superior knowledge of chest disease. It was, no doubt, argued that a general knowledge of all branches of medical science made the best physician, even for special diseases; and up to that time—with perhaps the exception of syphilis—there was no institution which limited itself to any particular affection. For these, and perhaps more personal causes, the physicians of general hospitals gave no help to the new

departure. The committee of management had, therefore, to select as physicians men unconnected with other hospitals; nor was the rule altered till, in 1869, being anxious to secure the services of Burdon Sanderson as physician, who had retired from the office of assistant physician in 1863, they rescinded the rule. Since then the staff numbers many physicians who have for years been attached to general hospitals.

The Hospital for Consumption was established at Brompton in 1 42, and at first contained 30 beds. In 1846 there were 90 beds, and in 1856, 200. In 1882, the new building being completed, there were and are now 321 beds. The locality was first chosen, no doubt, from the consideration that it was then suburban, and surrounded by gardens and fields. This condition has long since ceased, for the growth of London has extended for miles farther west, and new buildings, for the most part of high class, have changed the character of the place. The soil is gravelly, no doubt of riparian origin, and the writer can remember seeing the tidal influence of the Thames shown in several narrow inland drains within a mile of the hospital. The idea was also that the air was sedative and relaxing, in accordance with the views then held regarding the treatment of phthisis.

The death-rate from phthisis in England and Wales in 1838 was 38 per 10,000 living; in 1894, as shown further on, it had fallen to 14.

There is some interest in studying the results of treatment in the hospital during its early years, and I give the following summary from two reports made in 1849 and 1863 by the physicians.

It may be stated at once that there was no attempt or pretence at any specific treatment of phthisis, but all cases were treated on the general principles of practical medicine, and this, of course, varied with the individual views of the physician in charge. The diet was good and nourishing in all cases, and extras, including luxuries, adapted to the capricious appetite of the sick—such as chicken and oysters—while wine and other stimulants were supplied in quantities ordered by the physician. The bedding was good, with special spring arrangements for the worst bedridden cases, and open fires in winter and comfortable sofas and chairs contributed no little to the comfort of the wards. The arrangements for ventilating, heating, and cubic space are noticed further on.

In studying these results it must be remembered that the cases admitted were in all stages of the disease, and for the most part presented well marked symptoms on admission. It was natural that an institution open for the first time for consumption, to which only subscribers gave admission, should be so filled. Here was found a refuge for incurable cases, and those of doubtful nature, which in after years were found in the wards were put aside, from charitable motives, to admit sufferers of the more urgent class.

The first medical report in 1849 gave the results of six years' experience of in-patients, the cases being divided into three stages—consolidation of lung, softening, and cavity. The results are stated as "relieved," "much relieved," and "arrested."

REPORT FOR 1849.

In-patients, both sexes, 888 cases.

*First Stage—*

Relieved.....One half of all cases.
Much relieved..... 40 per cent.
Arrest..... 12 "

*Second Stage—*

Relieved..... 60 per cent.
Much relieved..... 23 "
Arrest..... 3 "

*Third Stage—*

Relieved..... 25 per cent.
Much relieved ..... 16 "
Arrest..... 3 "

More than one-half died within 18 months,
Duration of cases, 6 to 9 months..... 17 per cent.
" " 3½ years to 4..... 2 "

The second medical report, made in 1863, gave the results of thirteen years, which may be condensed as follows :—

Admissions, in-patients, 8,693.
Deaths per cent., 14.97.
Weights of 3,872 cases increased in 2,487.

REPORT FOR 1891.

The following figures from the report of 1891 show the results in some more recent years :—

Total cases of phthisis, excluding acute and casualty cases, 1,070.
Deaths, 222, or 20.7 per cent.

Weights of phthisis patients (No. of cases, 846).
Gained weight..... .. 469
Stationary..... ..... 141
Average gain per patient..... 5.1 lbs.

*Total Mortality—*

1885..... 18.3 per cent.
1886-7..... 15.9 "
1888..... 16.4 "
1889..... 17.1 "

St Bartholomew's Hospital for above years—
Phthisis cases, 340 ; deaths, 54 per cent.

Guy's Hospital for above years—
Phthisis cases, 180 ; deaths, 50 per cent.

Admissions of cases of phthisis to general hospitals were, of course, when symptoms became very urgent, as from hæmoptysis, pneumo-thorax, etc.

Being appointed assistant physician in 1855 in charge of out-patients, I soon became aware that the artificial division of phthisis into stages conveyed but little knowledge of the disease as a whole, especially as regards its probable progress and duration—in other words, its prognosis. It became evident that the affection had many varieties, and that its course was influenced by age, heredity, and the concurrence of

other disorders, as well as by symptoms referable to the lung condition, I therefore proceeded to note with accuracy not only the physical diagnosis but the concurrent history of each case; and after ten years I found myself able to tabulate the features of 3,566 cases of phthisis which had been under my own observation, the object being to show, as far as possible, the conditions which either favored or interfered with prolongation, and which, therefore, were indicative of an advance towards cure or to a downward course. In actual practice I have found my hands much strengthened by the knowledge so gained, having often been able to prognosticate a prolongation of cases which had been stethoscopically condemned. I have recorded elsewhere minute details of the above researches.*

The contributions of physicians of the hospital to the literature of tuberculous disease are indicative of the mental attitude of the profession in those days. In 1851 Dr. Theophilus Thompson gave able lectures on the methods of recognition and clinical aspects of phthisis, which were published by his son in 1863. In 1863 Dr. Scott Alison contributed a volume devoted to physical methods of recognizing chest disease; and about the same time Dr. Cotton issued "Phthisis and the Stethoscope." In 1872 Dr. Douglas Powell published a short clinical work, which was followed by an exclusively pathological treatise by Dr. H. Green. In 1879 appeared a work on "Pulmonary Hæmorrhage," by Dr. Reginald Thompson, which was followed in 1884 by "Family Phthisis," an exhaustive illustration of the heredity of disease; while in 1887 the well-known work of Dr. C. J. B. Williams and his son appeared on the "Etiology, Pathology, and Treatment of Phthisis." These were all before the days of Koch and Pasteur, whose discoveries were unsuspected additions to knowledge.

We must not speak of the present day, when the staff comprises some of the most earnest and successful students of bacteriology. There were two subjects closely connected with modern pathology which were sure to present themselves as problems to be worked out by experience at the hospital—the influence of the newly-discovered tuberculin and the question of the contagiousness of consumption.

In 1890, in consequence of the expectations raised by the reports from Berlin, it was resolved to submit a certain number of patients to the treatment by injections of Koch's tuberculin, and it was used on twenty-eight phthisical patients—eighteen males and ten females—the average age of males being thirty, and of females twenty-one.

The patients belonged to a class which generally improved under treatment by a good hygiene and suitable dietary:—

| | |
|---|---|
| Tuberculization without cavity | 17 cases. |
| Both lungs affected | 7 " |
| Unilateral cavity, limited | 8 " |
| Cavity in both lungs | 1 case. |

The tuberculin was supplied to the hospital from Berlin, under Dr. Koch's directions.

*Extracted from "Elements of Prognosis in Consumption," by James E. Pollock, M.D. *Longmans*, 1863.

The treatment was continued for four months.

Bacilli were detected in twenty-five out of twenty-eight cases.

We give the conclusions reported by the physicians:—

Tuberculin speedily causes inflammatory changes in an around tubercular lesions, and increases the amount of expectoration. Pyrexia always occurs. Bacilli not diminished in number. Causes loss of weight in most cases and extension of local disease.

The communication of tubercular disease by contact with or breathing the same air as persons suffering from that affection has been thoroughly investigated at the hospital, which affords the most abundant materials for elucidation of this important subject.

Since the recognition of the bacillus as being the invariable concomitant if not actually the proximate cause of consumption, the question of the communicability of the disease naturally comes to the front. The possibility of its production by inoculation of a healthy animal with morbid matter has been proved beyond question. That, however, is very different from the possibility of tuberculosis being conveyed by mere contact, however close, with a patient so affected, and it is of great importance to ascertain whether breathing the same air, inhabiting the same rooms, or ministering to a sick person can be a medium of infection.

The late Dr. Cotton first, and more lately (1882) Dr. C. Theodore Williams, collected all available facts regarding the officials of the Brompton Hospital and all persons employed in attending to the patients over a period of thirty-seven years. I have carefully studied the results they have published, and can vouch for their accuracy.

The hospital now consists of two separate buildings, which are on opposite sides of the road, but connected by a tunnel; and it is to the older of these, which was for many years the hospital proper, that the report applies. In 1856 it contained 200 beds, and was, as regards ventilation and cubic space, much inferior to the splendid modern building over the way. The object being to make the patients comfortable, it was generally overheated, and the ventilation often went wrong. The fresh air was introduced from the area surrounding the basement, and was forced by a fan moved by machinery along a series of passages on the floors of the building, till it escaped into the corridors and wards through grated openings, and finally was supposed to make its way out through Arnott's ventilating openings near the ceilings.

The system was a wretched failure, for, in fact, the terminal wards scarcely received any change of air, the motor power from below being insufficient, and there being no extracting power to insure its passage out of the wards. An outbreak of erysipelas, which proved fatal in several cases, called our attention to the presence of impure air, and the whole system of ventilation was altered, the present mode, by extraction of the used air, being substituted. This outbreak revealed to us the important fact that the foul air from the phthisical patients produced its usual result, in hospitals of sore throats and erysipelas, but did not lead to a spread of tubercular disease among the healthy attendants on the sick.

We give the statistics of cases of phthisis which occurred among the

attendants on the sick and other residents in the hospital, for which we are indebted to the researches of Dr. C. Theodore Williams. These cover a period of thirty-seven years. Three-fourths of the cases admitted are consumptive, the rest being heart cases or other affections of the chest. The out-patient department in the old hospital was very faulty, the rooms being small and crowded with from 200 to 300 patients daily, which must have been a source of danger to physicians, clerks, and porters.

The resident medical officer has rooms in the building, and also the house physicians, who remain for six months.

Of resident medical officers there were four. None had phthisis. Of about 150 house physicians, eight became consumptive. In only one was the disease contracted in the hospital. One had hæmoptysis before he came to reside and in one, disease appeared two years after.

Matrons were six in all. None had phthisis. They were resident for many years.

Of nurses there were 101. Three died of phthisis after leaving the hospital; one only had phthisis while in hospital.

Gallery maids sweep and clean the floor for several hours daily. None had phthisis.

There were twenty porters who had to wait in out-patient rooms and also in the post-mortem room. They have to carry the bodies from the wards. Among them there was no case of phthisis.

Of secretaries and clerks there were nine. None were affected by the disease.

Of dispensers there were twenty-two. Three died of phthisis, of whom one was intemperate, one took ill two years after he left, and one died of phthisis in the hospital. Two dispensers held office for twenty years.

Of physicians and assistant-physicians there were twenty-nine, of whom eight died, one from phthisis.

This evidence negatives the idea of phthisis being an infective disease under such circumstances as being grouped in a hospital, breathing the same air, and living under the same conditions as others similarly affected.

Later investigations have proved the fact that consumption is communicable, although not by personal contact, and that its existence depends on its transmission from one tuberculous individual (human or animal) to another. Such transmission is not aerial, but resembles more the process of inoculation. A certain amount of diseased product must enter into the animal economy, whether by the lung or the intestinal tract. It is recognized that the sputum of tuberculous patients, if dry, may be such an agent, and that the flesh and milk of tuberculous animals may convey the poison.

In accordance with these views, the Brompton Hospital has made stringent regulations with regard to the sputum and excreta of consumptive patients. They are received into vessels containing a 20 per cent. solution of carbolic acid, and, together with the general refuse of the hospital, are consumed in an automatic destructor. All soiled linen and

handkerchiefs are boiled, and all cups, spoons, etc., used by patients are disinfected in boiling water. We need not enter further on these admirable arrangements.

The ventilation of the hospital is done by extraction of the used air into passages above the ceilings, which enter a large shaft, which is kept heated day and night at a temperature about 10° higher than that of the wards. The entering air is taken at the level of the windows, and in winter passes over heated pipes, so that an average of 63° is obtained in all wards and passages. The air is changed about twice in the hour.

We have briefly reviewed the views of the profession on phthisis fifty years ago, and contrasted them with those of to-day. As regards the clinical forms of disease and their recognition by physical signs, we cannot expect further advances. That which accelerates or retards the morbid processes incident to their history seems to be sufficiently known.

Bacteriology is the study of the hour; but it is plain that the presence of bacilli alone is not sufficient to account for all the phenomena of tuberculous affections, and we are perhaps in danger of substituting the work of the laboratory and the microscope for clinical observation at the bedside. However this may be, we have witnessed the immense decrease of deaths from phthisis and a decided lengthening of its duration. Fewer die of it, and are slower to die when affected.

In seeking for the causes of this vast improvement in the health of the country, we must attribute it mainly to improved drainage of the subsoil, more cleanly habits, removal of insanitary surroundings, better dwellings, and a higher status of comfort in the lower classes.

Our treatment of consumption also has changed. We enjoin exposure to fresh air, climates of the bracing order at high elevations, an adjusted nutritive diet, and attention to all which can promote a higher vitality.

As yet we know of no agents which we can safely apply locally to the interior of the body for the destruction of bacilli or septic material. The energies of the medical mind are to-day devoted to "preventive medicine," and in this consists our hope that the most fatal disease of our time may yet be extinguished.

---

A Still More Extensive Breast Amputation.—Tansini (*Rig. Med.*) holds that in the attempt thoroughly to remove all lymphatic glands, which may possibly have become involved, secondary to cancer of the breast, recurrence in the skin has been overlooked. He calls attention to the frequency of recurrence of this sort in the form of isolated nodules in or near the scar. In order to avoid such recurrence, he removes the overlying skin of the whole breast, and a strip about four inches wide from the breast into the axilla. To cover the defect, a flap is dissected from the back, with its pedicle near the axilla, and stitched in position over the wound.—*Med. News.*

# SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Associate Prof. Clinical Surgery, Trinity Med. Coll.; Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children; Surgeon to St. Michael's Hospital. 68 Isabella Street.

FRED. Le M. GRASETT, M.B., C.M., Edin. Univ.; F.R.C.S.E.; M.R.C.S., Eng.; Fell. Obstet. Soc., Edin.; Surgeon, Toronto General Hospital; Physician to the Burnside Lying-in-Hospital; Member of the Consulting Staff, Toronto Dispensary; Professor of Principles and Practice of Surgery, and of Clinical Surgery, Trinity Medical College. 208 Simcoe Street.

## THE DANGERS OF RECTAL OPERATIONS.

BY JOSEPH M. MATHEWS, M.D., OF LOUISVILLE, KY.

Professor of Surgery and Clinical Lecturer on Diseases of the Rectum in the Kentucky School of Medicine; Rectologist to the Kentucky School of Medicine Hospital and the Louisville City Hospital, etc.

Instead of bringing any clinical material before you this morning, if you will permit me, we will discuss briefly the dangers to be apprehended in operating for rectal diseases. We will begin with the operation for internal hemorrhoids—is there any danger in this operation? If a patient were to ask you that question, you would likely very flippantly say, "No, there is no danger." I reported two thousand operations for hemorrhoids to the American Medical Association when it met at Cincinnati, without a death. On my return from that Association I lost a beautiful woman from the simple operation for internal hemorrhoids; the operation is therefore not devoid of danger. If you lose one patient in three thousand you cannot say that it is devoid of all danger, so I shall mention the dangers that might occur, and they might occur to you in your first case, rather than in the last of three thousand.

In the operation for internal hemorrhoids as practised by the ligature, for instance, an incision is always made around the base of the pile, leaving it as an isthmus, then tying the ligature. In that incision you may divide a very important artery. It is not once in five hundred cases, however, that I have to tie an artery in operating for internal hemorrhoids. By twisting, torsion, pressure, application of hot water, and such means, the hemorrhage can usually be checked; but suppose that you have not stopped the hemorrhage by such measures, suppose that you have not secured the artery? So great an authority as the late Samuel D. Gross reported having lost a patient in this city, when he resided here, from hemorrhage, after ligating an internal pile. I have had two or three nearly fatal cases of hemorrhage from ligating piles, discovering the danger in time to save the lives of my patients, but the facts show that we may have serious hemorrhage. Therefore, do not suppose because you are ligating small tumors that the operation may not

be dangerous from this cause. At the Louisville City Hospital, not long ago, a man died during the night from hemorrhage after he had a couple of piles ligated.

The second danger that I would mention in this connection is that from sepsis. I have tried to impress upon you that a small wound may be just as dangerous from this cause as a great wound, and have mentioned the pricking of the foot, for instance, with a pin, or a tack, or a nail, resulting in tetanus. You cannot conceive of a smaller wound, yet a fatal sepsis may supervene. You know the great distribution of nerves and lymphatics around the rectum, and you make an exposed wound whenever you cut around the base of a pile; consequently a septic condition may ensue, just as well as though you had a large wound.

The third danger, if you may so term it, in operations for hemorrhoids, is contraction of the anal orifice. All authors report this as one of the consequences of ligating internal piles. I do not often meet with this complication, but have seen it occur. I remember on one occasion I ligated seven large hemorrhoids in a young lady, dressing the wound carefully after the operation, as is my usual custom. Good recovery followed; there was no protrusion afterward, and no hemorrhage; but in about ten days after I discharged her, her father came to my office and said that his daughter was unable to have an action from the bowels; that she felt the desire to go to stool, that she took purgatives, etc., but she could not pass the feces. I asked him to have the patient come to my office, not thinking at the time what really might be the trouble, and to my surprise I found that the anal orifice was entirely closed. It was absolutely, totally occluded. The hemorrhoids had sloughed off, and perhaps because not watched as closely as they should have been, the surfaces had united, consequently closing the anal orifice, and if not promptly discovered would have gone on to a very bad condition. Therefore, I would have you watch out for this danger, and the best remedy is, every few days after operating for internal hemorrhoids, to slip your finger, well anointed, into the anus, introducing it as can be done without much pain; even at the risk of pain I would have you do it. Especially should this be done after the ligatures have separated. But suppose that you have contraction regardless of this care, what are you to do with it? I have mentioned this to you before, but as it is an extremely practical subject will go over it again. Some authorities call this condition stricture, and treat it as a stricture. One distinguished surgeon, a friend of mine, went so far as to attempt to dissect out this stricture in a patient whom he saw. This is not necessary; it is a traumatic stricture just at the anus, outside of the sphincter muscle; it does not involve the sphincter muscle at all; all you have to do is to introduce your speculum or dilator and break it down, and you will not have to do it again. It does not amount to a stricture and should not be treated as such, but it is simply a closure of the parts by granulation, traumatically, and is easily gotten rid of.

Let us next speak of the operation for fistula in ano. Are there any dangers attending this operation? Yes. In operating for fistula sometimes very extensive cuts must be made, as you have often seen me do in

this clinic: simply dividing the main channel will never effect a cure. After you have made your main cut, you have to take your probe and search for additional sinuses, and often they are found running in all directions. Let us suppose that one channel runs in such close relationship to, for instance, the urethra that you may have to divide this canal in making your cut. The main channel may run under an important artery distant from the anus, and division of this main tract would be dangerous. Consequently you have to determine whether you can finish your operation or not, but ordinarily you may cut some important vessels; therefore the hemorrhage before you dress the wound, after operating for fistula in ano, should be thoroughly checked. The danger then is injury to adjacent structures or organs, but the main danger is division of the sphincter muscle, which refuses to be repaired. So far as my reputation is concerned, I would much rather do a half-way operation for fistula in ano and fail to cure my patient, than to so divide the sphincter muscle that it could not be repaired, because, as I have said, this is an important muscle; it controls the feces, and if you destroy it by your cutting, or your manipulation, and it refuses to heal, the man or woman has incontinence of feces for life. I do not know of any better way that I can express the matter than to say, never divide the sphincter muscle but *once* during your operation. If you find an incomplete or crippled sphincter during the operation, beware of stretching it. At the risk of reiteration, allow me to again state, there is no use in dilating or stretching or breaking the sphincter muscle in doing an operation for fistula in ano. This refers to the stretching process that so many writers talk about—it was intended for an entirely different condition. You are going to divide the sphincter muscle in doing your operation for fistula, then why stretch? You will get relief of pain, etc., after you have divided the muscle, so you have nothing to gain by stretching it. The one danger, then, to be reminded of in operating for fistula in ano, lies in dividing the sphincter muscle.

Take the operation for a simple polypus of the rectum. Is there any danger in that? I will say there is very great danger. You will witness this condition often in children, 10, 12, or 14 years of age. The mother or father may say, or perhaps some physician has also suggested, that this child has piles. Children do not have piles. Whenever you hear of a protrusion from the anus in the infant, set it down in your mind that it is not piles. It is either a prolapse of the rectum, or it is a polyp. Suppose it is a polyp and you are called upon to remove it; is there any danger? A polyp is a tumor that is attached to the mucous membrane, or walls of the gut, by a pedicle; sometimes this pedicle is very long—it may be 5, 6, or 7 in. in length; generally, however, it is from ½ in. to 1 in. in length, and the operation suggested is that practised upon polypi in other portions of the body, for instance, in the nose or cervix, that is, twist it off. There is no hemorrhage of consequence, and the operation might not be attended by any particular danger, but you must remember that this polyp is supplied by an artery, and sometimes a good-sized artery, and in this twisting process you must, of course, include it. You cannot tell exactly whether you have twisted sufficiently or not to stop the hemorrhage, or to prevent hemorrhage after the polyp has been torn

away. Another operation is to tie this pedicle, catching the polyp either with your fingers or with an instrument. I desire to warn you against using an instrument in handling these polypi, especially in children, as they are easily torn off; but if the pedicle is long enough, lax enough and tough enough to tie, it is best to do so, because with a ligature around the pedicle you know that the danger of hemorrhage is reduced to a minimum. But the ligature that you apply may cut through the stump; this has occurred in my practice in half-a-dozen instances, in less than an hour after the operation, and you can readily see a fatal hemorrhage might result. This stem or pedicle may be attached very high up—2, 3, 4, or 5 in.—and when you have twisted or torn it off, the base or attachment is beyond the distance at which you can reach it with forceps; besides this, you may have great difficulty in recognizing it. Therefore, if you have hemorrhage in the rectum from removal of a polyp, it may prove to be a fatal hemorrhage. What are you going to do in such a case? Well, I would suggest that you always plug the rectum. You have not the time to divulse and look in and try to catch the artery, and, as Mr. Allingham says, the hemorrhage may be frightful. You had best at once prepare to stop it by plugging. The method of doing this has been explained to you time and again. The plug that I use is made of iodoform-gauze around a hard-rubber tube; by dilating the rectum well with your dilator or speculum, insert the plug as high as it will go, remove the speculum and let the gut grasp this plug. Of course, if I anticipated a violent hemorrhage, I would soak the plug in a solution of the persulphate of iron, diluted half-and-half with water; I say that, because there is some little danger of sloughing of the mucous membrane if you apply much of Monsell's solution undiluted, and I have found by diluting it I can check the hemorrhage as well as by using the solution in full strength. Therefore you will see there is some danger in even so simple an operation as tying off a rectal polyp.

Take the variety of internal hemorrhoids known as capillary piles. This is a dangerous form of piles—the small capillary variety is a pile that bleeds vigorously. You may be called sometimes, each one of you, to see a case in which there is violent hemorrhage from the rectum without any previous history of disease, and I state this to emphasize one point. I have seen physicians or surgeons amazed at this quantity of blood, suggesting that it was from the colon, or, as the common expression is, higher up than the rectum. I say to you that if you are ever called to a case of hemorrhage from the rectum, without any previous history of disease which would be a guide to you, if the patient has said that she suffers from internal hemorrhoids, protrusion, or something of that kind, it would lead you to infer the cause; but if you are called to a case that gives no such history, but has had one, two, or even five violent hemorrhages from the rectum, and has been treated on the premise that it came from the colon, or higher up than the rectum, you may be certain that it is from no such cause, because it is not. I have had many patients sent me with such a history, and in all of them the hemorrhage was found to come from just about one inch within the rectum, that is,

one inch from the anus. You may open the anus and see no hemorrhoids; you may get no history of a protrusion at all; but often there will be a congested condition around the lower edge, with exposure of an artery, which is the cause of all this trouble. Such a case puzzles many. I have seen them time and again, and you will see them. It is necessary for you to stop this flow of blood, because if it is half a pint to-day it may be a pint to-morrow; if a pint this week, it may be a quart next week. Suggest to such a patient that she take, for instance, an aperient, then wash out the bowel thoroughly. You should go to her home if necessary and take a three-valve speculum or dilator, and introduce it into the rectum after being freely anointed; open it as if you were simply going to inspect the bowel. If you desire not to give the patient an anesthetic for any reason, then take a piece of iodoform-gauze and dip it in a 5% solution of Monsell; squeeze it until about half dry and insert it in the anus, making it in the shape of a cone or bag, long enough to hang out of the anus, say 1½ inches; deposit it just inside of the rectum, so that the anus will grasp it when it closes after you take out your instrument. Then give the patient a hypodermic injection of morphine, and repeat it if necessary in an hour or two. Allow this plug to remain in the rectum just as long as it will. I say that, because unless you take a certain amount of precaution in this direction the patient will expel it within 20 minutes. Therefore, it is well to have the nurse or friend sit by the side of the patient and put her hand up against the anus, or, what would be better, put a pledget of cotton over the anus, and hold the hand over this cotton for an hour, or two hours, if necessary, changing from one hand to the other, or getting another nurse to substitute. In two or three hours the pain will have disappeared, and the patient will be able to retain the plug longer; but even if she should not, you will find when the plug is expelled, and the patient made quiet, that all hemorrhage has ceased and the patient is cured, proving beyond all peradventure that the hemorrhage comes from the lower end of the rectum. You may not be able to make it out by an examination; but if you will go upon the presumption that such is the fact, I will guarantee that you will find in 99 out of 100 cases in which hemorrhage has been diagnosticated as coming from the colon or upper rectum, that it comes from the lower end of the gut, as I have described. These hemorrhages never occur from above; there is no condition in the colon, save that of cancer, that would cause the loss of a pint of blood. It has often been said that an ulcer must exist in the upper part of the rectum, in the colon, or in the sigmoid flexure; how could an ulcer permit the discharge of a pint of blood? An ulcer is a pathologic condition with a deposit of fibrin or lymph, which prevents bleeding. Consequently the idea that an ulcer exists is disproved. If it were said that there were an abrasion or an injury to the bowel from a hard piece of fecal matter, or something of that kind, that had torn the surface and exposed a vessel, we might account for the hemorrhage; but we cannot do it with the idea that it is a simple ulceration. Therefore, if I have done nothing more than to give you a point as to how to stop hemorrhage from the rectum by simply plugging with iodoform-gauze dipped in Monsell's solution, it will aid you wonderfully in the practice of rectal diseases.

I will this morning mention only one more condition, and that is stricture of the rectum. Putting it in the simplest way, let us suppose a patient comes to you, and you feel just within the anus, say one inch from the sphincter muscle, a constriction through which you can pass your finger only, with no ulceration above, you say this is a simple stricture, easily reached, easily handled, and easily treated. Now, this is a great mistake. The operation for such a condition is either a division or breaking of the stricture. I broke a stricture of this kind in my office a few days ago, and the man nearly bled to death; so you will see there is considerable danger in this operation. Always apprehend a violent hemorrhage in dealing with a rectal stricture which is benign in its nature, as it will sometimes occur.

---

## PATHOLOGY AND SURGERY OF INTUSSUSCEPTION.

In the Hunterian lecture on this subject Dr. Power gave the following conclusions (*British Medical Journal*):

Intussusception is a condition which brooks no delay in its treatment, for something must always be done at once, except, perhaps in those slight cases which are indistinguishable from severe colic. In all doubtful cases purgatives should be completely withheld. Cats and rabbits bear a simple invagination with remarkable freedom from symptoms, and after a varying period of time the invaginated bowel could be excised, and the animal would recover. All the animals, however, to which purgatives were administered, after the intestines had been invaginated, died when enterectomy was performed. Clinical evidence teaches the same lesson, for all the records of cases show that the symptoms have been seriously increased when the patient has been purged. The routine treatment of intussusception is to chloroform the patient, and steadily to fill his large intestine with hot salt solution under a hydrostatic pressure of not more than three feet in a child, the fluid being allowed to remain in the intestine at least ten minutes. The earlier this method is adopted after the appearance of the symptoms the better are the results obtained, but it should not be adopted in enteric intussusception, in cases where the symptoms are very acute, or in those where the absence of signs or symptoms, with a sub-normal temperature, leads the surgeon to suspect that the intestine is becoming gangrenous. In these cases, and when the intussusception is not reduced after irrigation has twice been tried, and when after reduction the intussusception has thrice occurred, the abdomen must be opened.

The surgeon must then be prepared to deal effectually with the conditions he may find by such operative means as he can carry out with the least amount of shock, and in the shortest space of time that is compatible with the safety of the patient. This will be insured if he uses the method with which he is the most familiar. But he should bear in mind that hardly a case can arise in which he is justified in closing the abdominal wound without at least an attempt to complete the operation by reducing or removing the intussusception. Such half measures as the

formation of an artificial anus are hardly ever justifiable, and the results obtained by them are usually most disastrous. In the light of our present knowledge it appears that the use of a button or bobbin is most likely to give good results when enterectomy has to be done for an enteric intussusception, while Maunsell's operation is best adapted for the cure of ileo-cæcal and colo-colic forms of intussusception.

## METHOD OF REMOVING LARGE CALCULI FROM THE BLADDER.

Freyer (*British Medical Journal*) pronounces Bigelow's method, which consists in the rapid crushing of the stone, and complete removal of its fragments at one sitting by means of the aspirator and cannula, the safest and best for calculi of all sizes in patients of all kinds and conditions, provided only that this operation is feasible. When not practicable he considers that calculi up to about three ounces in the adult, and a corresponding weight in the child, are best removed by perineal lithotomy; beyond that suprapubically.

Dr. Freyer states that six and one-eighth ounces is the largest stone he has removed by Bigelow's method. He advises that in no case should a stone, large or small, be subjected to a cutting operation till, after trial, litholapaxy is found not to be feasible.

The lithotrites used by Dr. Freyer generally vary from No. 4½ up to 18 of the English scale; but it is only the larger sizes, from No. 11 up to No. 18, that are of any practical use in dealing with these large stones. One lithotrite was constructed for him many years ago by Weiss, and it has crushed some 320 calculi. It combines the handle and locking action of Bigelow's lithotrite with the fully fenestrated blades of Weiss and Thompson. This ball handle affords a much firmer grip to the hand than the old-fashioned wheel—a grip that is essential in dealing with large and hard calculi. The locking action is of the simplest character, the instrument being locked or unlocked by a quarter turn of the wrist, to the right or left respectively, and the left hand is free to grasp the female blade, and hold it steady in the bladder during the various manipulations, so that the tilting of the instrument that is liable to occur when the button-locking action is employed is thus obviated.

The cannulæ required for large calculi in the adult vary from Nos. 14 to 18.

Dr. Freyer has worked chiefly with a simplified form of the aspirator which Bigelow used for some years before his death.

## THE SURGERY OF CHRONIC PERITONITIS.

Largeau (*Progrès Médical*, November 27th, 1897) advocates abdominal section for chronic peritonitis of the perihepatic, perigastric, peri-cæcal, pericystic, pelvic, and, above all, traumatic or post operative types. It often happens that the setting free of adherent structures, or the division of a band of organized lymph, causes the immediate disappearance of intolerable gastric or gastro-intestinal disturbance and chronic obstruc-

tion. In chronic tuberculous peritonitis the case is different. Care must be taken that the disease is not assuming a temporarily acute form when the abdomen is opened. It is true that mere exploration has given good results after all forms, but Largeau admits that where there is ulceration and suppuration the prognosis is bad. In the ascitic and in the dry form of tuberculous peritonitis abdominal section is alike satisfactory. A small abdominal wound should be made at first, and the deeper tissues divided with great care, as intestine is often adherent, and the diseased peritoneum is not always easy to distinguish. The lower end of the incision should be brought low down in a female subject, as it is important to explore the internal genital organs; in fact, tuberculous appendages, often the primary seat of the whole mischief, may require removal. The main part of the operation is thorough drying of the exposed cavity with fine sponges or compresses. Not only Douglas' pouch must be so treated, but care must be taken to dry all diseased peritoneum lying under coils of intestine; hence the operation always takes some time to do properly. Only soft adhesions between viscera should be separated. Whilst this drying process is the essential feature, the surgeon must never fail to seek for the primary seat of disease. The chances are very great in a female subject that the Fallopian tubes are at fault; but in women, as in all male cases, the cæcum and appendix must be searched, and tuberculous disease of the omentum (very common as a secondary complication), or an ulcerating area, beginning in the small or large intestine, looked for. The last condition is the gravest; when detected, pus is generally present around the breach in the intestine wall. This pus must be washed away; it is useless to attempt to close the intestine by suture, hence drainage is compulsory. Lastly, in the purely dry form of tuberculous peritonitis separation of adhesions often proves very satisfactory, as they are firm in this type, and give rise to obstruction. Washing out with chemical solutions or flushing of the peritoneum seems superfluous, and drainage is only needed when the intestine is ulcerated. It is important to close the abdominal wound carefully.

---

## ENLARGED AND DISPLACED LIVER CURED BY CHOLECYSTOSTOMY.

Mauclaire (*Bull. de la Soc. Anat. de Paris*, November, 1897) writes of a patient of Le Dentu's, a stout woman subject to symptoms of gall-stone colic. Jaundice was not observed, but the fits of pain became intolerable. The liver descended to half-way between the hypochondrium and the iliac crest, but hepatic dullness extended well above the lower body of the ribs, and, as the displaced anterior edge of the liver was very thick, it was clear that the liver was hypertrophied. The stools were well colored. At the operation Le Dentu found the gall-bladder greatly distended, but not adherent. A big calculus was worked out of a kind of a pouch, close to the orifice of the duct, by careful manipulation. The edges of the wound in the gall-bladder were stitched to the abdominal incision. The bile came away for a fortnight, and the pain disappeared.

The patient's bed was now arranged so that her head lay lower than her pelvis, and the orifice of the fistula well compressed. In three days it had closed. Six weeks after the operation, after the patient had been up and about for three weeks, the abdomen was examined. The liver had reduced itself, and no longer came down below the false ribs. On careful percussion it was found that hepatic dullness was strictly limited to the normal area, so that both the displacement and hypertrophy had disappeared.

---

## SURGICAL HINTS.

It is better to have too many assistants than too few.

A paronychia or "run around" rarely demands incision. Daily wet dressings with firm gauze packings between the nail and skin will usually effect a cure. The first packing hurts, the others as a rule do not.

When you boil water to be used in an operation, you should at the same time boil a vessel with which to dip it out, and this vessel should never be set down in an undisinfected place, for it is necessary to have its outside as clean as its interior.

In an emergency operation, if you happen to be without operating gowns, remember that a newly-washed night shirt will serve quite well. It is far cleaner than one's external clothing, and will protect the patient against the accidental contact of instruments or ligatures with one's surgically unclean shirt or trousers.

A patient with anal fissure should be instructed to smear the orifice inside and out, as well as he can, with vaseline before each movement of the bowels. This will in a great measure prevent fæces from clinging to the parts in passing, and will also greatly facilitate the passage of the stool. Do not advise such a patient to use glycerine locally.

If you happen upon a recent compound fracture where the end of the bone still protrudes through the opening which it has made in the skin, take every precaution that this end may not slip back until it has been thoroughly disinfected. In many instances it is safer to scrub and clean the surrounding parts, and then after forcing the fragment a little farther through, to cut it off. When this has been done the fracture may be reduced with a fair prospect of aseptic healing.

Fissure of the anus usually gives rise to intense pain which often lasts many hours after stool. This may be greatly alleviated by inserting a very narrow slip of moist gauze with a flat probe, so that the gauze lies against the raw surface of the fissure. It gives the same relief which is experienced when a light packing is placed between the skin and the nail in cases of so-called ingrowing toe-nail, and for the same reasons, namely, it prevents inflamed tissues from touching each other and drains away irritating wound secretion. Weakly iodoformized gauze is best because of the local anæsthetic action of the drug, but be sure that no idiosyncrasy exists forbidding its use.—*International Journal of Surgery.*

# NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF
CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.
STEPHEN LETT, M.D., M.C.P.&S., ONT.

## THE RELATION OF MENTAL DISEASES TO GENERAL MEDICINE.

Under this title Dr. Cowles summarizes the practical results of recent advances in psychiatry (*Boston Medical and Surgical Journal*, September 16, 1897). A contrast is drawn between the "depleting treatment" of the first quarter of the century, and the "supporting treatment" which accompanied the establishment of the scientific medicine of to-day. In appreciation of this principle alienist physicians have been leaders; Van Deusen's theory of "neurasthenia," a term introduced by him, antedating the publication of Beard's conception of "nervous exhaustion," manifested by "irritable weakness." The study of the nervous system and the exposition of the degenerative *sclerosis*, to which it is subject, have shown one great truth—that overwork and exhaustion may be potent causes of nervous diseases, not only of a functional, but of an organic character, and the great significance of this, in relation to mental diseases, lies in the inference that anything which interferes with the maintenance of proper nutrition of the neuron may begin by abating power in the mental function. The relation of mental to general diseases, on clinical lines, is thus a close one. The best advances in psychiatry have been made by the application of medical common sense, and there is no mystery in the adaptation of the principles of the "supporting treatment" to the needs of the insane. Such objective symptoms as might be noted, *e.g.*, constipation, dyspepsia, neuralgia, etc., would be palliated by the means any physician might employ, but this would be done with the understanding that they are all likely to be only expressions of the prime condition, which calls first for elimination, nutrition, rest and sleep; then for mental and physical hygiene; and then, as convalescence progresses, for proper exercise, entertainment, occupation and gradual restoration to self-responsibility.

Dr. Cowles reviews briefly later advances in the study of toxic influences, and of the anatomy and physiology of the nervous system, and concludes with a warning which may not be without value to hospital physicians as well as to a general medical audience:

"Now that mental pathology is becoming clearer in the light of general pathology, shall not a new interest arise in the study and treatment of insanity? Already the practice of alienists is getting upon new lines. Great success has been attained in some torpid mental and bodily states of long standing by the use of thyroid extract. Much attention is being given to the disinfection of the intestinal canal and its systematic and

thorough evacuation by high enemata. Elimination of retained auto intoxicants has been attempted with some success by the subcutaneous injection of large doses of a solution of common salt. These and other procedures are still largely experimental. But whatever you do, while you exhibit all the effective tonics, of which nutrition, rest and sleep, are the best, there is one controlling practical principle to be remembered, and, with this, one special caution. It is a safe rule that mental symptoms always mean weakness; excitement is an extreme degree of irritable weakness, in which there is great exhaustion in the mechanism of mental control. This thought should beget care in the use of sedatives and hypnotics. Beware of the coal-tar compounds and the like; they are good and sometimes necessary for proper use, but not for many days in succession. Change them and omit for a while; they go against nutrition, and drug intoxication often aggravates the disease and is mistaken for it. When your patient is taking food well, be content with his getting two or three hours of sleep or less in each twenty-four hours, even when excited. Such sleep is better than when it is drug produced. When the appetite flags and sleep is not produced by persistence in hypnotics, the complete suspension of all medicines, and frequent feeding, will often be followed by gradual cessation of excitement, a clearing tongue, and improvement in sleep. These brief hints are simply mentioned by way of example. Above all things it should be remembered that the indication is always for a "supporting treatment."

## NEUROTHERAPY.

The Treatment of Vertigo Known as Meniere's Disease.—De La Tourette (*Semaine Médicale*, 1897, p. 301, No 38) reports the case of a man fifty-eight years old. The patient, who had been previously quite well, was taken suddenly one morning in June, 1893, with a violent vertigo, having all the features of Meniere's disease. Following this the patient complained of a persistent noise in the right ear, and of a continuous vertigo, for which he was given quinine in large doses with excellent results. Apropos of this case the author takes up the history, causation, lesions and diagnosis of Meniere's disease. He points out the role played by hyper-excitability of the labyrinth in the production of vertigo, and dilates on the efficacy of quinine in the treatment of the auricular forms of vertigo. The medicament should be given in ten-grain doses once or twice a day for a period of at least a fortnight.—*Post Graduate.*

[This is a larger dose than has hitherto been recommended and we quite agree with the author.—Ed.]

## NEUROLOGY IN GENERAL MEDICINE.

From neurology, General Medicine has learned much and will learn still more of the effect of mental states, mental impressions, disposi-

tion—of character, if you choose, and I believe that better than others the neurologist appreciates the paramount importance of heredity, probably because it is more frequently forced upon his attention. If surgeons and gynecologists would oftener consult the heredity and personal equation of the patient they would less frequently be annoyed by post-operative neuroses, insanities and the lesser nervous troubles that go to make up an incomplete recovery. And this leads me to mention what has already begun and what, God grant, may soon be consummated; the passing of the reflex. When to the nerve specialist comes a case of epilepsy with a note from the family physician saying that the ovaries have been removed without effect, and so, perhaps, the trouble is in the brain, or a case of convulsive tic, with the message that the spasm has continued in spite of cauterization of the turbinates, or, as occurred to me a few days ago, he sees a born neuropath with typical traumatic neurosis who has undergone five pelvic operations for relief of her nervous symptoms, he groans in spirit and looks longingly forward to the millennium when the man who operates shall have or procure an adequate understanding of that for which he cuts. In the meantime, under the keen scrutiny and rigid requirements of Neurology the so-called reflex as a cause of grave nervous disorder is gradually being pushed into its rightful place; that is, among the relatively unimportant curiosities of etiology.—Patrick, in *Chicago Medical Recorder.*

---

HEMORRHOIDS.—Dr. Coston (*Mathews' Medical Quarterly*) prefers the clamp-and-cautery operation over all others for the following reasons: 1. In the operation with ligature you tie up the most sensitive of all nerve ends, and they are sure to resent it by intense pain, which will continue until the stumps slough and the ligatures come away. In the cautery operation you have no such result to contend with; the nerve end is simply cut away and cauterized, and there is nothing left for it to do but cicatrize, and it is left in the best possible condition for this. 2. The ligature may slip and secondary hemorrhage occur; after the clamp and cautery operation there is no danger of secondary hemorrhage. If hemorrhage occurs it does so immediately, and the operator can blame only himself for it. 3. There is no danger of a recurrence. Kelsey, of New York, and Smith, of King's College, London, both support me in this statement, and they have had a vast experience with this operation. It will be admitted by all that recurrences do follow the ligature operation. 4. Convalescence is much more quickly completed, for the reason that it begins at once under the eschar produced by the cautery, and would be completed by the time the ligatures came away should the two operations be used on separate tumors in the same case at the same time. 5. The mortality following the clamp and cautery operation is practically *nil.* 6. The cautery operation requires less care from the physician after the operation. 7. There are no unpleasant sequelæ.

# OBSTETRICS AND GYNAECOLOGY.

IN CHARGE OF

G. P. SYLVESTER, M.D.,

Corner Isabella and Church Streets.

C. A. TEMPLE, M.D., C.M., F.T.C.M.,

Assistant at St. Michael's Hospital. 200 Spadina Avenue

## PREGNANCY AND FIBROID TUMORS.

BY H. C. COE, M.D., OF NEW YORK.

*(Concluded from last month.)*

It is hardly necessary to say that a woman with a large interstitial fibroid who becomes pregnant should be kept under careful observation. Doubtless such patients may go on to full term, though rarely. Few of us would care to have any member of our family take such a risk, but would prefer to terminate the pregnancy at an early stage, or to at once perform hysterectomy.

From what has been said about tumors springing from the lower uterine segment, it will be inferred that in these cases pregnancy is a serious complication. The dystocia which is present during labor is a familiar theme in all text-books on obstetrics. From a gynecologic standpoint they are equally important. While it is granted that pregnancy may often continue to full term with impacted pelvic tumors, it is certain that the patient will suffer from various disturbances, and has the almost certain prospect of a difficult labor, usually with a dead child, unless an abdominal operation is performed. There can be little question that if an intelligent effort to dislodge the tumor from the pelvis under anesthesia is unsuccessful, the uterus should be emptied, provided that the cervical canal is not so contracted that it is impossible for the fetus to pass. It will be a question in most cases in which the patient is not seen until the fifth or six month (or even the fourth), whether it would not be better to allow the pregnancy to advance to term, and then to perform an elective Porro-Cæsarian operation.

The possibility of enucleating *per vaginam* an extraperitoneal (or even an intraperitoneal) fibromyoma of the lower segment will naturally suggest itself to one who is familiar with such work, and this procedure if practicable would seem to be preferable to sacrificing the entire uterus. It should be borne in mind, however, that the increased vascularity of these growths during pregnancy entails some risk of hemorrhage, so that the surgeon may be obliged to ligate the uterine arteries in order to control bleeding, or perhaps to extirpate the uterus. Pregnancy is not necessarily interrupted, and if it is, abortion does not imply an untoward result for the operation, since the obstruction to the escape of the product of conception has been removed.

The persistence of pregnancy after accidental injury of the gravid organ

during the course of abdominal operations shows that myomectomy by the upper route may be attempted with good prospect of success under favorable conditions. Certainly an explorative celiotomy does no harm, and may enable the surgeon to free an impacted or adherent tumor from the pelvis, so that the patient may go on to term—a far more rational procedure than to attempt enucleation of the growth *per vaginam*, with the finger, unaided by the eye. In fact, it may be better in a doubtful case to at once perform celiotomy in order to determine the exact nature and relations of the tumor. The incision may then be closed, and the growth attacked *per vaginam*, especially if pus be present, as in a successful case reported by the writer.

The indications for supravaginal amputation or total extirpation do not differ essentially from those in the case of the non-pregnant fibroid uterus. Rapid enlargement, marked pressure-symptoms, serious impairment of the general health, may lead the surgeon to adopt radical measures at the outset. He will be influenced in this decision by the fact that under these conditions pregnancy can not, and should not, continue, and the inevitable abortion will diminish the chances of recovery from a subsequent operation. The operation itself is no more difficult than under ordinary circumstances, and the prognosis is equally good. The abdominal is certainly preferable to the pelvic route, in view of the more perfect control of bleeding and the diminished risk of injuring adjacent structures, especially the displaced bladder or ureter.

To summarize: Submucous polypi may be removed in the ordinary manner when they are accessible. Subperitoneal growths can be disregarded unless they are pedunculated and become impacted in the pelvis, undergo torsion of the pedicle, or contract adhesions. Liberation of the tumor under anesthesia failing, it is entirely in the line of conservatism to open the abdomen, to separate adhesions, or to remove the tumor, leaving the uterus undisturbed.

Tumors in the lower segment may be let alone if they are found to rise out of the pelvis as the uterus enlarges. Should the contrary be true and pressure-symptoms arise, abortion should be induced if the patient is seen at a sufficiently early stage to allow the fetus to pass the obstruction.

Conservative myomectomy may be performed subsequently, and the hope of a second normal pregnancy may be confidently held out. If there is any reasonable doubt as to the diagnosis, explorative celiotomy is indicated, especially in view of the frequency with which impacted ovarian tumors are mistaken for fibroids. Liberation or removal of the tumor may not interfere with the course of the pregnancy. Should the tumor not be discovered until the latter half of pregnancy, it would seem better (in the absence of serious pressure-symptoms) to wait until near full term, and then to perform Cæsarian section, followed by supravaginal amputation, subject, of course, to the wishes of the patient.

The usual indications for hysterectomy in cases of fibroid tumor become more urgent if pregnancy occurs, since an exaggeration of the symptoms may be expected. The patient cannot bear a living child, her life is imperilled, and conservatism is out of place under the circumstances. The abdominal is preferable to the vaginal route for the extirpation of the pregnant fibroid uterus.

# NOSE AND THROAT.

IN CHARGE OF

J. MURRAY McFARLANE, M.D.,

Laryngologist to St. Michael's Hospital. 32 Carlton Street.

D. J. GIBB WISHART, B.A., M.D.C.M., L.R.C.P.L.

Professor of Laryngology, etc., Ontario Medical College for Women; Lecturer in Laryngology and Rhinology, Trinity Medical College; Rhinologist and Laryngologist Hospital for Sick Children, St. Michael's Hospital, and the Girl's Home; Toronto General Hospital. 47 Grosvenor Street.

## THE CHOICE OF INSTRUMENTS USED IN OPERATING UPON CARTILAGINOUS OR BONY ENLARGEMENTS OF THE NASAL SEPTUM AND UPON DEVIATED SEPTA.

BY DR. RICE.

One of the gentlemen has asked me what instrument he should obtain for this branch of nasal work. There is no fixed rule as to the necessary instruments. The one which will remove the obstruction most easily would naturally be the best. A scalpel or bistoury will cut off a cartilaginous convexity, and I have used them. The objection is that the bleeding is more profuse and continuous with a sharp knife than with scissors, trephine or saw. First remember that the amount of tissue to be removed is in proportion to the degree of obstruction existing, and to the total size of the nasal passage. It is wrong to cut away a large amount of nasal septum in a very free, open nostril.

There are certain small operative procedures which may be stated. We frequently see a horizontal ridge of cartilage near the floor of the nostril, which impedes nasal respiration a little, and which produces reflex irritability by contact with the turbinated side. Instead of sawing or drilling this off, it can be scarified through and through with the points of nasal scissors. We do not remove the mucous covering, but by the destruction of many of the small blood-vessels obtain sufficient contraction. Cartilaginous prominences which have a small base can be snipped off with the blades of nasal scissors; or a small prominence in a wide nostril can be contracted by a sub-mucous puncture of the galvano cautery. Where the deviation is considerable and in consequence the nostril quite narrow, we think the nasal saw is the best instrument. We have had a good deal of trouble with nasal saws because, as a rule, they are made too frail and much too long. They have been so flexible at the point that it was necessary to cut close to the handle, and this carries the end of the saw too far into the nostril; or the cutting surface has been so long that if we incise the cartilage with the point of the saw it is difficult to avoid wounding the skin at the orifice of the nose. Almost all deviations of the nasal septum are pretty far in front, and I would give the proper measurements of the saw as follows: Entire length 5½ inches; the blade 2¼ inches long, of which the sawing portion should only be 1¼

inches. You will find it difficult in many cases to commence the incision with the saw, as the surface of the cartilage is round and the saw easily slips away. This can be avoided by starting the saw nearly at right angles to the septum, and after the proper depth of the incision is reached, the saw can be turned parallel with the cartilage. It will make the operation easier if after the nasal speculum is introduced the patient's head, if we are operating on the right side, is turned by the assistant toward the right; or, if upon the left side, turned to the left. This places the nasal septum prominently for the operative work. A 10 p.c. solution of cocaine is the proper strength. After the saw is carried down to the bony maxillary ridge it is often better to finish the incision with the nasal scissors than to try to cut through the bone with a saw. We are fortunate when there is sufficient space between the floor of the nose and the septal ridge to allow us to carry the lower blade of the scissors into the interior meatus. After the line of incision has been finished by the scissors, the piece of cartilage can be removed with a small pair of alligator forceps, which I always use. These forceps are also useful in nibbling off any small prominences of cartilage or bone which may have escaped the saw. The trephine is used but little now-a-days, but we should not forget that there are one or two conditions where it may be employed with advantage, and one is where the bony or cartilaginous ridge or the deviated septum is horizontal in its long axis and almost resting upon the floor of the nose. It is so low as to make the use of the saw from above downward difficult, and there is no space to place the saw underneath to cut upward. Another condition where the trephine may be used is where a horizontal prominence extends so far backward that it cannot easily be removed with the saw. As to the necessary equipment of motor and trephine, we will speak at another clinic. An operator expert with the trephine does not need any shield to prevent his wounding the turbinated side of the nose. It is better in removing the horizontal ridges to cut somewhat from above downward and remove the ridge piece by piece, than to endeavor to remove the entire length of a horizontal ridge by carrying the trephine directly backward. Oftentimes in trying to remove it all there is so much cartilage and bone that a parallel trephine is completely filled before the operation is finished. It is of the utmost importance to remove in a cleanly way all cartilage and bone into which we have cut. If we do not, the patient and the operator will both be much troubled by the septic results following, such as local pain, rise in temperature, acute follicular tonsilitis, etc. There are numerous other instruments for the removal of deviated septa, such as the revolving knife, shaves, electrical saws, but many of them are quite expensive and nearly all the cases may be rectified by the simpler instruments.—*Post Graduate.*

## THE DIAGNOSIS OF POST-NASAL ADENOIDS IN CHILDREN AND THEIR REMOVAL.

BY DR. RICE.

I desire at the commencement of our clinic to-day to speak briefly in regard to the large number of mouth-breathing children who come to us

for treatment. In the first place, it can be safely stated that in nine-tenths of these cases the lesion will be found to be either enlarged faucial tonsils or post-nasal adenoids, or a combination of both. These conditions must be excluded before the case is put down as nasal catarrh. I speak of this because I have seen so many children treated month after month for nasal catarrh who were suffering from tonsilar enlargement. It is a mistake easily made by persons of limited experience, because the nostrils are found to be filled with secretion; the child catches cold constantly, and everything points toward the ordinary condition of catarrhal rhinitis. It is, however, simply a matter of plugging the nasal openings posteriorly with adenoids and a consequent accumulation of nasal secretions. The symptoms in these cases are always pretty much alike—usually anæmic and illy-nourished, the child breathes partially or wholly through the mouth, catches cold at all times, suffers from impaired hearing, oftentimes earache; is croupy, with more or less bronchial catarrh through the winter. Such general symptoms as these always indicate more than simple nasal catarrh. The diagnosis is very easily made if we look into the anterior part of the nose. Although there may be accumulated nasal secretions, no deviation of the septum and no hypertrophy sufficient to occlude the nostrils will be found. Enlargement of the middle turbinated is very rarely a factor in children, so at once we are brought back to the vault of the pharynx as the source of trouble. We can state from clinical experience that there is more or less enlargement of the third tonsil in all these cases, and I have been impressed lately with the frequency of mouth-breathing children in whom there is very little faucial tonsilar enlargement. It has occurred to me that great enlargement of the faucial tonsils occurs more rarely than in former years, but that moderate enlargement of the post-nasal tissue is just as frequent. There can be no effective argument urged against the advisability of the removal of post-nasal enlargement when it interferes with nasal respiration. I oftentimes find it difficult to see this tissue with the rhinoscopic mirror in children, and it is much harder at the clinic than in a private office because children are frightened by the large audiences here. But after we have excluded anterior nasal obstructions, foreign bodies, little remains except post-nasal adenoids and faucial tonsils, and I frequently make the diagnosis with the curette. This Munger curette is much more easily introduced than the finger, and anybody who is accustomed to its use can quickly determine whether an enlarged tonsil exists. Let us employ it in the case of the child who is before us, and who has never breathed satisfactorily through the nose. You ask me whether an anæsthetic should not be employed in all cases. This depends on two conditions—the amount of tissue to be removed and the wish of the parents. If there are no enlarged faucial tonsils, and the enlargement of the third tonsil is not extreme, this can be removed very quickly and with one introduction of forceps. We should hardly undertake at one sitting to remove two faucial tonsils and a large amount of post-nasal enlargement without an anæsthetic. I would not advise the use of cocaine in these cases unless we are operating on a very sensitive child without an anæsthetic, and then only to be applied against the middle pharynx so

that the child will not notice the introduction of forceps behind the uvula. Cocaine applied high up in the vault makes the tonsil hard and difficult of removal. The instruments best employed are the large cutting forceps and the curette. How shall we make the diagnosis with the curette in those cases where we cannot see with the mirror? If the curette is introduced into an adult pharynx the surface will feel as smooth as glass, and it is not possible to sink the point of the curette into the tissues. It is difficult even to scarify a normal post-nasal space because the surface is so hard and slippery. It is quite different in a vault filled with enlarged adenoids. When the point of the curette reaches this tonsilar enlargement, it will be felt to be soft and spongy, the point of the curette is easily pushed into it, and resistance is felt when we attempt to push the curette downward. This makes the diagnosis certain. You are all so familiar with the operative procedures in this case that only a few words remain to be said. After the anæsthetic has been given and the mouth-gag introduced between the teeth, it is best first to apply the cutting forceps to the roof of the vault. A mistake is made sometimes in trying to carry the forceps too high. Adenoid in children is easily reached and is frequently situated at the junction of the posterior wall and the roof, or even a little lower down on the posterior wall. We should be able to remove nearly the entire mass of post-nasal adenoid with two grasps of the cutting forceps, and then the curette can be employed to cut away all small projections and make the post-nasal space smooth. Clinically, in an operative sense, the vault of the pharynx might be divided into three parts, the middle and the two lateral spaces. The enlargement in the median line should be easily removed and then the curette and forceps should be turned a little to the side to grasp the lateral adenoid. In some children this lateral enlargement is very pronounced and may be suspected by the prominence of the ear symptoms. It is unnecessary to say that forceps and curette should be handled with no roughness whatever. If the instruments are directed too far laterally, the orifices of the eustachian tubes may be wounded, and I know of one case where the posterior end of the nasal septum was grasped and cut by forceps. If both faucial tonsils and third tonsil are to be removed, it is wise to proceed slowly and wait for the bleeding from one source to cease before producing further hemorrhage. I have never seen dangerous hemorrhage in any of these cases, but there are a number on record, so that we should be prepared to introduce tampons in the post-nasal space. Cotton, wet with a 4 per cent. solution of cocaine, is a good hemostatic, or styptic cotton could be introduced and afterwards strips of styptic gauze may be pushed through the anterior nares. When the faucial tonsils are large it is well to excise them first, during the primary anæsthetic stage. The child will breathe much better during the remainder of the operation. It is a wise precaution to keep the patient at least half an hour after the operation to be sure that there is no bleeding. I think it is better not to use anterior nasal washing or the posterior nasal syringe for several days after operating. Septic infection is exceedingly rare following post-nasal operative work. Explain to the parents that they must not expect perfect nasal

respiration for at least two or three weeks, as it will require that length of time for the vault to contract and congestion to subside. An operation like this is frequently followed by a severe catarrhal rhinitis which postpones somewhat the benefit looked for. In regard to the after treatment, we may use the nasal douche cap and Seiler's tablets if the nasal secretion persists, but the washing should be discontinued as soon as oversecretion subsides. A weak solution of menthol and liquid albolene sprayed into the nose will be of service until the nasal passages are thoroughly recovered.—*Post Graduate.*

---

## DANGERS OF THE NASAL DOUCHE.

Lichtwitz (*Sem. Méd.*, November 26, 1897) deprecates the routine prescription of the nasal douche in all cases of hypersecretion of the nasal mucous membrane. Irrigation is called for only when the nasal fossæ require clearing of pus and crusts; for instance, in idiopathic ozæna. This affection is mainly limited to the nasal fossæ properly so called, and irrigation is in such a case the most fitting form of procedure. An ordinary syringe or enema syringe with suitable nozzle should be used. In all other nasal affections irrigation is inadequate or useless; it is even dangerous. Repeated flooding of the mucous membrane may give rise to olfactory lesions. Antiseptics are highly injurious, and pure water is badly borne; the physiological solutions of sodium chloride, sod. bicarb. or sod. sulph. are the only harmless liquids. In numerous cases irrigation has caused the sense of smell to be temporarily or permanently diminished or lost. Distressing frontal or occipital headache may result owing to the liquid passing into the sinuses. The injection of irritating liquids may even set up inflammation of these cavities. The most skilful and careful irrigation is insufficient in many cases to prevent the resulting headache. A very grave complication is the penetration of the liquid into the middle ear, suppurating otitis media occasionally supervening. In acute coryza, especially in children, douching should never be practised. In one such case known to the author mastoiditis followed irrigation of the nasal cavities. The predisposition to otitis is increased after retro-nasal operations, in particular after ablation of adenoid vegetations. For eight years the author has given up all irrigation after pharyngo-tonsillotomy, and during that period has met with no case of post-operative complication.—*Atlantic Medical Weekly.*

---

Vicarious Menstruation after Hysterectomy.— Marsi (*British Medical Journal*) states that total hysterectomy was performed on a young woman in August, 1896. Ever since she observes that the urine becomes bloody at intervals precisely corresponding to former monthly periods. Between the times of appearance of blood the urine is absolutely normal, and at no time is there any evidence of disease of the urinary tract.

# PAEDIATRICS.

IN CHARGE OF

ALLEN M. BAINES, M.D., C.M.

Physician, Victoria Hospital for Sick Children; Physician, Out-door Department Toronto General Hospital. 194 Simcoe Street, and

J. T. FOTHERINGHAM, B.A., M.B., M.D., C.M.,

Physician, St. Michael's Hospital; Physician, Outdoor Department Toronto General Hospital; Physician, Hospital for Sick Children. 39 Carlton Street.

## ROCHET AND JOURDANET: INCONTINENCE OF URINE IN CHILDREN.

The difficulty in overcoming certain cases of incontinence in children is recalled by a somewhat elaborate, well-systematized paper by the authors who classify cases of incontinence in children under two general headings:

1. Those in which incontinence is the expression of a distinct local lesion, or those in which it develops in the course of a general disease, of which it is an expression of minor importance. Such forms of the disease are called symptomatic. The appropriate treatment is that directed to the general condition, as post-typhoidal adynamia, or to the local exciting cause, as a rectal polyp or balano-posthitis.

2. Those in which incontinence is the only symptom. Such cases are called essential, though in reality they more correctly would be named neurotic. The term "incontinence" is misleading, since this implies a a constant dribbling; whereas in children it nearly always assumes the form of involuntary urination.

The essential incontinence of children is always associated with a neurosis, usually hereditary; indeed, Guyon considers wetting the bed a pathognomic sign of this condition. It may be, perchance, the only sign, though it is often associated with other manifestations even more characteristic.

The condition itself may be directly brought about by undue contractility of an irritable detrusor muscle, or by hyperesthesia of the mucous membrane of the prostatic urethra, or by thoughts or ideas which produce frequent urination by day and incontinence by night.

In the class of cases in which the neurosis is manifested in the form of spasm of the vesical sphincter, this may result in either partial retention, which necessarily favors wetting of the bed, or of complete retention, which would cause a true diurnal and nocturnal dribbling (retention with overflow). Very exceptionally the neurosis may be expressed in the form of a paresis of the sphincters; this also would give rise to constant dribbling. In examining patients it is important to bear in mind the possibility of retention with overflow. This condition would be detected at once by catheterization, and if the injected fluid were returned through

the catheter with slight force the surgeon would at once suspect paresis in the detrusor muscles. The introduction of a catheter will also detect atony or hyperesthesia and spasm of the ureteral sphincters.

In case urethral exploration remains negative, abnormal sensibility to distention would be suggested as a possible cause of incontinence. Injection into the bladder would at once settle this question, since the viscus if hypersensitive to tention would reject the liquid when but a small amount had been driven in. In case exploration remains negative the incontinence may be classed as psychic.

The treatment should, of course, be primarily that applicable to neuropathies. Belladonna is particularly indicated in those cases which are probably due to an over-excitability of the detrusor muscles of the bladder. No one has been able to suggest a better means of administration than that first proposed by Trousseau. The initial dose is one-sixth of a grain of the extract given in the evening at bedtime. After several days this dose is doubled, the patient finally taking as much as from one-half to one grain, the surgeon carefully watching for toxic symptoms and stopping the medicine very gradually if the desired effects are obtained. Other medications, possibly serviceable in the same condition, are bromides, chloral, camphor, lupulin, lactucarium, and opium.

When the cause of incontinence is immediately traceable to hyperesthetic condition of the mucous membrane of the posterior urethra, general sedatives are still serviceable. Local treatment is, however, especially indicated, instillations of cocaine or of silver nitrate and the repeated passage of a cold full-sized sound being particularly useful.

The very rare cases of incontinence due to anesthesia of the urethro-vesical region, practically always due to lesions of the spinal cord, are said to be benefited by cauterization of the posterior urethra. Trousseau's advice for atony of the vesical sphincters is that strychia should be given in fairly full doses morning and evening, continuing the medicine for two days and then allowing two days of rest. The quantity of the drug is gradually increased. Guyon, in his class of cases, has been particularly successful with electricity. An electrode is introduced, insulated excepting at the end. The other electrode is placed either upon the pubis or the lumbar spine, and the Faradic current with slow interruptions is employed. Each treatment should last about five minutes; this directly exercises the weakened muscles and restores their tonicity. To control the psychic influences, especially the dream of micturating, various means are serviceable. Thus, the slumber may be rendered less profound by means of tea or coffee. These agents are, however, not to be commended in the treatment of neuropaths. Another method is to wake children regularly during the night. This method gradually accustoms the bladder to regular evacuations. The number of wakings should be proportionate to the quantity of urine secreted and to the frequency of micturition during the day. Punishment is successful in some cases, since it makes a powerful impression upon the brain. Suggestion has been utilized in other ways; thus, painful subcutaneous injections have been employed, or operations have been threatened. Finally, hypnotic suggestion has been used, Liebeault having claimed by this to have cured

cases. The first step in this treatment is to procure hypnotic sleep. It is then suggested that the child should rise at certain hours to urinate; gradually the number of risings by night is diminished until finally they are abolished entirely, the child being forbidden to urinate until it wakes in the morning.

The pure psycopathic incontinence dependent upon dreaming of micturition is probably the most troublesome of all to cure. Psychic treatment is alone efficient. The cure is usually spontaneous in these patients, and accomplished about the time of puberty, when amorous dreams replace those of micturition. These patients often become congenital hypochondriacs who swell the ranks of those who suppose themselves suffering from spermatorrhea, and who after gonorrhea hypnotize themselves concerning the urethra and are thus able to see a constant discharge of semen.

The cases of incontinence due to retention of spasmodic origin are readily cured by the regular passage of catheters and sounds. Once daily the bladder is comparatively evacuated. Once or twice a week full-sized sounds are passed after the catheter. Treatment is continued for about a month, amelioration is usually rapid, and the cure complete. Should incontinence of overflow result not from spasm of the sphincter but from paresis of the detrusors, the only treatment would, of course, be faradization.—*Gazette des Hôpitaux, 1897: Therapeutic Gazette.* Vol. xxi., No. 7.

---

Contribution to the Resuscitation of the Asphyctic New-born.—Wolfram reports a case of asphyxia in the new-born, where Schultze's method could not be used on account of the low ceiling of the room, and which was resuscitated by laying the baby cross-wise on his lap, with the head hanging down; he now encircled the thorax with his left hand, and the thighs of the child from behind with the right, lifted the latter up towards the abdomen, at the same time compressing the thorax. On relaxing this movement the first inspiration was obtained. In a second case of deep asphyxia the same method proved successful.—*Munch. Med. Wochensch, 1897, xliv., 287.—Pediatrics.*

---

Douglas, Charles: Infantile Stools and their Significance.—(*The Physician and Surgeon.* 1897. Vol. xix., No. 10).

After a careful consideration of the various forms of stools and their significance, the author reaches the following conclusions:

1. Green stools are never healthy stools.
2. They show imperfect digestion always.
3. In direct proportion with their presence is the damage and danger to the child.
4. These stools render children more susceptible to acute gastro-enteritis in hot weather.
6. The high infantile summer mortality follows children suffering from this colored stool.

6. Through unhealthy nutrition the blood is poisoned and the various tissues improperly nourished.

7. The excreting organs, particularly the kidneys and liver, are frequently damaged by the extraordinary duties imposed on them in eliminating these poisonous results from the blood.

8. This continued irritation and innutrition favors the development of inherited diatheses and acquired cachexias.

9. No child is free from complications dangerous to life, or from developmental errors who suffers from frequently recurring green shaded stools, particularly the very liquid and foul smelling ones.—*Arch. of Pœd.*

---

## SULPHUR IN SEPTIC AND TUBERCULOUS ULCERS.

Miller, of Edinburgh (*Practitioner*, February, 1897), praises very highly the application of sulphur in obstinate or recurrent ulcers and abscesses. Sulphur is non-poisonous, and when applied to fresh surfaces there are formed sulphuretted hydrogen, sulphurous and sulphuric acids, and it is these three products that act on the tissues. Being *in statu nascendi*, their bactericidal action is especially lasting and energetic. In fresh wounds and ulcers the sulphur is applied as a fine powder; in septic and tuberculous abscesses a 10 per cent. glycerin emulsion is injected. The burning following the application of sulphur can be prevented by the addition of cocaine. The author says that under the sulphur treatment ulcers and abscesses that have before resisted every kind of treatment for months frequently heal within a week. Another of the advantages of sulphur is its cheapness.

---

## PANCREATIC CALCULUS AND TEMPORARY DIABETES.

W. Polkyakoff (*Berl. Klin. Woch.*, March 14, 1898) describes the case of a man, aged 28, who during three weeks had four or five colic-like attacks accompanied by vomiting. After this (about two months) he had a persistent dull pain and feeling of oppression in the upper part of the abdomen. He lost flesh and became weak, in spite of his appetite being unusually good. The excessive hunger and thirst induced the patient to seek medical aid. The urine was then found to be excessive in quantity (about five pints per diem) and to contain much sugar. Great improvement followed suitable treatment for the diabetes, and the sugar entirely disappeared from the urine. Polyakoff discusses the nature of the attacks of abdominal pain from which the patient suffered, and comes to the conclusion that they were attacks of pancreatic colic. According to another author, pancreatic calculus, by causing atrophy of the gland, may, after some years, lead to diabetes and a form of diarrhœa somewhat analogous to "fatty stools." In this case, however, the diabetes was of temporary occurrence, and the disturbance of the pancreatic cells may have been only functional.—*British Medical Journal.*

# PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

H. B. ANDERSON, M.D., C.M.,

Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital. 241 Wellesley Street

H. C. PARSONS, M.D., 97 Bloor Street West.

I.

## SYPHILIS OF THE STOMACH.

M. Dieulafoy related at the May meeting of the Académie de Médecine, the case of a man who had previously had syphilis, who suffered from simple ulcer of the stomach, which resisted for a year and a half every kind of treatment usual in such cases. It was only after specific treatment (injections of bi-iodide of mercury and iodide of potassium internally) that the affection was cured. It was evidently a case of syphilitic ulcer of the stomach, an affection which had been clearly established in a clinical and anatomo-pathological point of view by Cornil, Fournier, &c.

The speaker in commenting on the case said that syphilis of the stomach was not so rare as might be believed. The lesions presented themselves under various forms; hæmorrhagic erosions, ecchymosis of the mucous membrane, gummous patches, &c. There, as well in other cases of loss of substance of the gastric walls, it was probable that the gastric juice continued what the initial ulcer commenced. The symptoms resembled those of simple ulcer, pain, gastric intolerance, vomitings, hæmatemisis, cachectic wasting. None of the symptoms permitted to affirm the syphilitic nature of the gastric lesion. However, when the symptoms of ulcus simplex were observed in a syphilitic person it was natural to suppose the gastric lesion was of itself syphilitic. Consequently, it should never be forgotten when in presence of gastric ulcer to look for syphilis in the antecedents of the patient and apply the treatment accordingly. The notion of syphilis as a cause of gastric ulcerations was the more important to recognize, as it permitted to cure patients who might otherwise be advised to submit to surgical intervention.

II

## TUBERCULOSIS.

At the Medical Congress held at Montpellier last April, the subject of tuberculosis was continued. M. Auche communicated a case of transmission of the malady by the placenta. A woman in the last stage of consumption was confined prematurely of a living child. She died three days

afterwards, and the autopsy revealed the presence of the ordinary lesions of pulmonary tuberculosis and the existence of tuberculous ulcerations on the intestine. Fragments of the placenta were injected into a guinea-pig, and provoked typical generalized phthisis. The child was placed in an incubator, and although every care was taken of it, it only lived four weeks. The post-mortem showed the presence of tubercles in the liver, the spleen, the lungs, and the kidneys. The digestive tract was healthy. It was unquestionably a case of transmission of the disease through the placenta.

---

III.

At a recent meeting of the Société de Chirurgie, M. Monod communicated a case of tetanus treated by amputation and injection of antitoxin. A woman, æt. 56, a hard drinker, entered the hospital for a complicated luxation of the wrist. The speaker treated the wound antiseptically, and injected antitetanic serum beneath the skin. In spite of the disinfection the wound suppurated a little, and fifteen days afterwards muscular spasms were observed in the neck, denoting a commencement of tetanus. The arm was immediately amputated, and the injection renewed. The contractions continued, with delirium, for several days, but finally the patient recovered. Bacteriological examination proved that the nervous phenomena were due to the bacilla of Nicolaier. The history of the case proposed two questions: How was it that the first injection, given in the classical way and at the outset, was powerless to arrest the tetanic accidents, and eventually, to which of the two, the serum or the amputation, was the recovery due? As to the first question, he would recall to mind the experiments of M. Roux, who divided his animals into neutral and non-neutral; in the first the serum always succeeded, whereas in the second no immunity was observed. It was probable that in a pathological point of view the above patient belonged to this last class. As regarded the part played by the operation and the serum in the recovery, he did not believe that the amputation alone prevented the development of the tetanus; the experiments of Nocard having proved that this mutilation had never arrested the evolution of the disease.

---

IV.

At the May meeting of the Society for Innere Medizin, Prof. Senator reported on two cases bearing on

THE PATHOLOGY OF THE SPINAL CORD.

They were cases of interruption of conduction of the cervical cord. The first case had a course of thirteen years, the second of one month. The patient, a woman of 36, was admitted into the Augusta Hospital in January, 1883. Up to three years previously, when she had a nervous fever, she had always been healthy. After this illness pains in the back of the neck came on, which ceased for a time and then returned. She

also complained of weakness of the legs. She was a big woman, and otherwise healthy. There was no sign of other spinal disease. The lower limbs showed symptoms of spastic spinal paralysis; the sense of position of the legs was quite wanting. In the arms considerable atrophy of the muscles and paresis; claw position of the hands. No reaction of degeneration; paralysis of the bladder. The condition did not change materially. She left the hospital, and for ten years she lived in a room on the fourth story, where the speaker visited her from time to time. Gradually pronounced disturbance of sensibility came on, with complete anæsthesia reaching as high as the nipple line; the atrophy of the arm ascended, particularly in the domain of the ulnar nerve. Blisters followed by ulcers formed on the toes. On the thighs also ulcers formed, which healed and broke out in other places. Six months before her death serious bedsores formed, and suppuration of hæmorrhoids, whereby the patient's condition was much reduced, and later on there was fever. During the later years the clonic spasms were so bad that the patient had to be fastened to the bed at night. The general diagnosis was not difficult; there was clearly a disease centre in the cervical cord, but the nature of the disease was still uncertain. The autopsy revealed a tumour in the cervical part, 7 centimetres in length, extending from the fifth cervical to the seventh dorsal segment, and which proved on microscopical examination to be a sarcoma. It had caused complete disappearance of the spinal cord at its site, so that not a trace of nerve substance was any longer present. There was both ascending and descending degeneration. The reflexes were exaggerated. Bastian had assumed, and Bruns had proved, they would be abolished when the interruption was complete, but the law was not without exceptions, as the case proved. The speaker saw the patient three months before her death. and the reflexes were then still exaggerated. Even if during the latter weeks of her life they had been abolished, this would have been no proof of the correctness of the Bastian-Bruns law, as the loss might have been due to the badly nourished condition of the patient. The anatomical condition was decisive for the question; the traces of recent destruction of the last remnants of nerve substance must have been found; muscular cells must have been been seen, but there were no traces of any. Individual cases had run a similar course to that related; for instance, a case, carefully examined by Bastian, and one published by Schultze of Bonn, Rosenthan and Mendelsohn, of Erlangen, had proved that the reflexes did not take the shortest course, but that over the calamus scriptorius, and that with powerful stimulalation they could even take other courses.

---

V

## THE BIOLOGY OF LEUCOCYTES.

*Virchow's Archiv*, Bd. 151, H. 2, contains a study on this subject, by Drs. A. Leowy and P. F. Richter, workers in Prof. Senator's laboratory. The first part of the article treats of the influence of artificially-pro-

duced leucocytosis upon bacterial infection and intoxication. For the production of the hyper-leucocytosis nuclein and spermine were employed. (Pilocarpine was tried, but soon given up.) Whilst the injection of these substances had scarcely any effect after infection, if the leucocytosis was set up before it even large doses of poison were frequently borne. The observation was particularly interesting that hyper-leucocytosis was effective not only against the bacteria themselves, but also against toxines. The practical importance of this is at present only small, however, as clinically the infection naturally precedes all treatment.

It showed, they remarked, that hyper-leucocytosis is preceded by hypo-leucocytosis, but as decomposition of leucocytosis takes place in both stages, it does not much matter whether the protection is ascribed to the one or the other. They have not succeeded in isolating the protecting body from the blood, but they have succeeded in demonstrating in blood thus changed an albuminous body not present in ordinary blood. The author tested *in vitro* the glycolytic power of blood rich in leucocytes and regularly found it reduced.

---

VI.

## PERIODIC PARALYSIS OF OCULOMOTOR NERVE.

Klutschkin records an interesting case of ocular paralysis in a girl, æt. 15, who, since her childhood suffered from malaria, headache, &c. Since menstruation commenced these symptoms have become more severe, with vomiting and pain in the eyeballs. In 1896 she found herself unable to open the left eye at all. The headache at this time only lasted a few days and was accompanied by malarial symptoms. On examining the eye it was observed that the pupil of the left eye was much dilated and neither reacted to light nor on convergence. Diplopia was present although nothing abnormal could be discovered in the fundus.

There was a great reduction in the sensitiveness of the left nervus trigeminus. Two months later the oculo-motor paralysis returned. Under quinine treatment these attacks recurred. There was no trace of "migraine ophthalmo-plégique," but the case corresponded with Senator's periodic paralysis which occurs in the interval between the menstruation periods. The differential diagnosis was based on the assumption of malaria poison having weakened the peripheral branches of the trigeminal nerve.

---

Generally speaking, surgical intervention is indicated: (1) in cases of appendicitis with prolonged abdominal pain; (2) when suppuration is progressing, when symptoms of pyæmia supervene or the abscess threatens to perforate into the peritoneal cavity; (3) in cases of generalized peritonitis, consecutive to perforation of the abscess. Operation is contra-indicated when the patient presents cardiac adynamia. In typical cases, medical treatment (rest, opium, and diet) may be tried first; but, when the affection runs an abnormal course, surgical operation should be performed.—*Gersuny.*

# The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.

EDITOR:
JOHN L. DAVISON, M.D.

ACTING EDITOR:
J. T. FOTHERINGHAM, M.D.

ASSOCIATE EDITORS:

*Surgery:*
G. A. BINGHAM, M.D.
F. LE M. GRASETT, M.D.

*Medicine:*
N. A. POWELL, M.D.
W. BRITTON, M.D.

*Obstetrics and Gynæcology:*
G. P. SYLVESTER, M.D.
C. A. TEMPLE, M.D.

*Nervous Diseases and Electro-Therapeutics:*
CAMPBELL MEYERS, M.D.

*Pathology and Bacteriology:*
H. B. ANDERSON, M.D.
H. C. PARSONS, M.D.

*Nose and Throat:*
J. MURRAY MCFARLANE, M.D.
D. J. GIBB WISHART, M.D.

*Pædiatrics:*
J. T. FOTHERINGHAM, M.D.
ALLAN BAINES, M.D.

*Eye and Ear:*
G. STERLING RYERSON, M.D.
C. TROW, M.D.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* The Canada Lancet Publishing Co., 24 Wellington St. W., Toronto.

FRED. H. GRAY, Business Manager.

**The Largest Circulation of any Medical Journal in the Dominion.**

## Editorial.

### THE TORONTO GENERAL HOSPITAL STAFF.

The appointments in the various departments of the General Hospital for 1898-99 are announced, and the new House Staff have begun their duties. The appended list, which does not include the Consulting Staff, will give our readers some idea of the enormous advances made by that useful and excellent institution, and of the volume of work done annually, not only in teaching in both the Colleges of the city, but in the relief of the sick.

HOUSE STAFF:

| | |
|---|---|
| H. Anderson, | John McCrae, |
| F. H. Bethune, | C. M. Stewart, |
| N. E. Farewell, | G. A. Sutherland, |
| W. E. Graham, | W. C. White, |
| D. McGillivray, | T. Bradley. |

REGISTRARS:

| | |
|---|---|
| G. W. Badgerow, | John McMaster, |
| Geoffrey Boyd, | K. C. McIlwraith, |

Wm. Britton,
F. Fenton,
W. J. Greig,
B. Z. Milner,
R. D. Rudolf,
G. P. Sylvester,
C. B. Shuttleworth,
A. A. Small.

OUT-PATIENT DEPARTMENT:

| *Surgeons.* | *Physicians.* |
|---|---|
| H. A. Bruce, | W. B. Thistle, |
| C. A. Temple, | G. Gordon, |
| F. Winnett, | J. E. Elliott, |
| A. H. Garratt, | W. H. Pepler, |
| F. N. G. Starr, | A. R. Gordon, |
| B. E. McKenzie. | H. C. Scadding. |

EYE AND EAR INFIRMARY:

R. A. Reeve,
G. S. Ryerson,
G. H. Burnham,
Chas. Trow.

NOSE AND THROAT DEPARTMENT:

G. R. McDonagh,
Jas. D. Thorburn,
D. J. G. Wishart.

PATHOLOGISTS:

John Caven,
H. B. Anderson,
H. C. Parsons, } Assistants.
J. A. Amyot, }
J. O. Orr.

ELECTRICIAN:

C. R. Dickson.

ORAL SURGERY AND DENTISTRY:

G. S. Cæsar,
E. H. Adams.

BURNSIDE AND GYNÆCOLOGY:

J. A. Temple,
A. H. Wright,
U. Ogden,
J. F. W. Ross,
A. A. Macdonald,
L. M. Sweetnam.

ASSISTANT PHYSICIANS AND SURGEONS:

(ACTIVE STAFF, EMERGENCY BRANCH, BAY ST., TORONTO.)

| *Physicians.* | *Surgeons.* |
|---|---|
| A. M. Baines, | Geo. A. Bingham, |
| W. P. Caven, | N. A. Powell, |
| J. M. MacCallum, | B. Spencer, |
| J. T. Fotheringham, | A. Primrose, |
| Graham Chambers. | E. E. King. |

PHYSICIANS AND SURGEONS:
(ACTIVE STAFF, TORONTO GENERAL HOSPITAL.)

| *Physicians.* | *Surgeons.* |
|---|---|
| J. E. Graham, | F. LeM. Grasett, |
| J. L. Davison, | I. H. Cameron, |
| A. McPhedran, | L. Teskey, |
| Chas. Sheard, | R. B. Nevitt, |
| T. F. McMahon, | G. A. Peters, |
| W. H. B. Aikins. | B. Riordan. |

MEDICAL SUPERINTENDENT:
Chas. O'Reilly.

---

## THE ONTARIO MEDICAL LIBRARY ASSOCIATION.

The first meeting of the Directors appointed at the annual meeting in June last was held on the 22nd of July, when the following officers were elected for the ensuing year:

President, Dr. J. E. Graham; Vice-President, Dr. W. J. Greig; Secretary, Dr. H. J. Hamilton; Treasurer, Dr. Herbert Bruce; Curator, Dr. N. A. Powell; Assistant Curator, Dr. W. J. Wilson.

The establishment of an Academy of Medicine, as urgently advocated by Dr. Osler at the annual meeting and reported in our last issue, came up for consideration. As the proposal had the unanimous approval of the Directors, it was thought that the scheme merited a full and free discussion and the serious consideration of the three medical societies which are interested equally with this Association. It was therefore hoped that this subject would be brought to the notice of each society as soon as the autumn meetings are well under way.

For the purpose of making the Association more useful to its members and to the profession of the province outside of Toronto, it was pretty well decided to have printed and distributed among the members a catalogue of the more important and useful works now on the shelves.

Heretofore the Library has been open only from two o'clock to six each afternoon (Saturdays excepted). The Directors feel that the opening of the Library during the morning hours would be of advantage to some of its members. We understand the Library will after the August vacation be open during the morning as well as the afternoon. This, we are given to believe, depends somewhat upon the support and encouragement accorded by the Toronto members. We trust that the reading, the progressive, the advanced among our confreres will take steps, if they have not already done so, to identify themselves with an Association which was originated by the profession, is maintained by the profession, and conducted solely in the interests of the profession, and, therefore, indirectly for the benefit of the public at large.

Of the advantages of joining such an Association as this we propose to speak briefly in the next issue

## THE DISCIPLINE COMMITTEE.

The *Canadian Pharmaceutical Journal* for July contains the following: "Envious thoughts are aroused in the pharmaceutical mind when one reflects upon the power possessed by the governing body of the medical profession to erase from the register the names of erring brothers . . . . But, alas! no such remedy is at hand in pharmacy as in the sister profession of medicine." Then follow some very severe remarks upon the licensed pharmacists who accept situations in departmental stores. Elsewhere in the same issue, with remarkable inconsistency, appears an editorial entitled, "Prosecution and Persecution," beginning with the advice, really a threat, "It would be well for the Ontario Medical Council to take heed to its ways," and proceeding to call in question in a very prejudiced and misleading way the recent very proper action of the Council in depriving of their licenses those members who had sold themselves to the Munyon Company. Another threat runs thus: "It might be well for the Council to remember that Corporations have been deprived of privileges conferred upon them when such privileges were being used to the detriment of the public welfare." Dr. Sangster, in moving the enforcement of the sentence upon one of the offending parties, put the case admirably when he said that in spite of the very extensive campaign conducted by the Munyon concern the provincial press in the attempt to rouse public ignorance and prejudice, he did not believe that there was any genuine public desire to be humbugged; but that if there were any widespread feeling that these men were being wronged, he would advise the Council, upon whom the Legislature had, in the passing of the Medical Act, laid the painful duty (hitherto so faithfully performed) of protecting the public against their operations, to go to the Legislature and lay upon them the onus of this disagreeable work, demanding of the Legislature that it punish these men themselves.

The druggists' journal goes on to say that there is no difference between the man who prescribes Munyon's Female Cure and he who orders Hayden's Viburnum Compound, and that "it is doubtful if the physician who orders Munyon is not more certain of the remedies used than the one ordering H. V. C." Two blacks do not make a white, and even if the premises were right the conclusion would be wrong. But we do know the formula of the latter remedy and not of the former. And, moreover, the Council would not discipline the man who in private practice might order H. V. C., or Paine's Celery Compound, or Munyon's Female Cure, although we all hold the man who would habitually prescribe in that style to be unworthy of public confidence. Furthermore, the Council is purging the profession of these men, not because they have, in their private capacity, ordered Munyon's remedies, but because they have sold themselves and by implication the honorable profession to which they belonged, to this soulless American trafficker in the needs and ignorance of the public. Canada cannot too soon cast out such foreign invaders; the breed is too common on the other side of the line, and we shall do well to hold them

rigorously at bay at our own frontier. To one statement of the article quoted, we say amen; it is as follows: "Why should the physician who accepts a salary from Munyon be considered guilty of 'infamous and disgraceful conduct' while another physician is allowed to lend himself to a departmental store, doctoring the proprietor, 'his sisters and his cousins and his aunts,' together with the whole staff, at cut-rate prices?" Our only comment is again that two wrongs cannot make a right. The evident motive of the entire article is to befriend the Munyon people, in the vending of whose wares the chemist makes a profit. We deprecate such sentiments, as the interests of the public and the *morale* of both chemist and physician are best conserved by mutual confidence and harmony. The action of the Council was taken without a dissenting vote.

## THE VICTORIAN ORDER.

The passage through British Columbia of the contingent of the Victorian Order of Nurses on its way to the Klondike, a few weeks ago, was accompanied by much blare of trumpets and social prestige. The methods adopted here in "floating" the Order were also put into use there, and the same sort of unaccountable (?) prejudice and opposition stirred up. Letters have appeared in the Victoria *Daily Colonist* from persons interested in existing organizations, whose income and existence are threatened by the invading Order. The private nurses, too, seem to have been treated with the same lack of tact that characterized the treatment meted out to the medical profession here, else we should not find one of them writing thus, over her own name: "We feel very much pained by the insinuation that the nurses of the Victorian Order do their work out of love to God and man, whilst we work only for the sake of our fees." The whole thing inspires very mixed feelings—gratitude that those in high place should honestly desire to undertake for the good of the people at large, and resentment at the tactless interference with the rights and sentiments of those who have, with quite as much disinterestedness, been seeking the very same good ends.

## PREPARATIONS OF IRON IN THE TREATMENT OF CHLOROSIS AND ANEMIA.

At a recent meeting of the Société de Thérapeutique, a report of which appears in *Le Progrès Médical* of April 3, a discussion on this subject was opened by M. Bardet, who said that the majority of authors regretted that it had been generalized by including in it the treatment of various forms of anemia, instead of limiting it to chlorosis. M. Bardet, however, was of the opinion that when it was necessary to employ iron preparations the special treatment became the same in each case He considered it difficult, in a discussion on therapeutics, to separate chlorosis, properly so called, and the various forms of anemia. It has been well aid that in the treatment of anemia the principal indication was to sup-

press the cause and then the anemia would disappear. But, he said, it was none the less true that the iron treatment played a great part in therapeutical intervention, and consequently it would be prejudicial to leave out anemia in this discussion. Moreover, he questioned whether it was correct to profess to be able to remove the causes, which were more frequently connected so closely with the effects that it was impossible to make out the precise limits between them.

The value of different preparations of iron had been the subject of much discussion. Some authors had advocated the use of the free metal; others had recommended the iron salts; others, again, had given the preference to organic preparations, and among these several authors had adopted exclusively the albuminates. M. Bardet was convinced that all these discussions were useless, and that all iron preparations were good or bad according to the particular cases, not forgetting that everything depended on the absorption, and that this was itself dependent exclusively upon the digestion; and as this was a most complex phenomenon, varying according to the individual, certain preparations might prove good for some persons and bad for others. All iron preparations might be tried, and the one that was tolerated by the patient was the right one.

With regard to the different preparations, M. Bardet preferred hemoglobin, although there was another preparation which he thought should not be forgotten in a discussion on this subject. This was glycerophosphate of iron, which he thought was destined to take an important place in therapeutics. Up to the present time it had not been easy of employment, owing to the difficulty in keeping it. M. Bardet had, however, made use of this salt in anemic persons by combining an organic iron preparation with the glycero-phosphate of iron, and particularly with the phospho-glycerate of lime. He had employed these combinations for the past three months with the best results.—*N. Y. Medical Journal.*

## THE TREATMENT OF HEMORRHOIDS BY INJECTIONS.

The treatment of hemorrhoids by the injection of carbolic acid and glycerin, mixed in various proportions, into the substance of each pile by means of a hypodermic syringe was first used by American surgeons. S. G. Shaleeta, of the Kieff Jewish Hospital (in a reprint from the *South Russian Medical Gazette*), has modified this method by using pure liquid carbolic acid, injecting each pile with a Pravaz's syringe to a certain degree of fulness, and completing the operation in one sitting. Two, three or four syringefuls of the acid are injected, according to the number and size of the tumors. For external piles he uses a mixture of two parts of pure carbolic acid to one part of a two per cent. solution of cocaine. Even if four syringefuls of this mixture are injected the quantity of cocaine is not sufficient to cause dangerous symptoms. As a matter of experience only a few drops should be injected where we have to deal with external piles, the syringe being introduced through the mucous membrane, and not through the skin. The history of sixty-nine cases treated in this way is given, and the results in all cases were highly encouraging. When

the piles shrivelled up and separated the surface presented was similar to that produced by the operation for ligature or the clamp and cautery. The advantages which the author claims for this mode of treatment are: (1) Absence of marked pain during the injections. (2) No necessity for anæsthesia (this is a great advantage in old and feeble patients, and those exhausted by repeated hemorrhages). (3) Little risk of suppression of urine following this operation. (4) No loss of blood during the operation. (5) No necessity to keep the bowels quiet for three or four days after the operation, as is the case in other methods of operating.—*British Medical Journal.*

## THE TREATMENT OF FISSURES OF THE ANUS WITH COCAINE AND ICHTHYOL.

Cheron (*Prakt. Dermatol.*, No. 7) proceeds as follows: The anal fissure is first made insensible by laying upon it, during five minutes, a bit of cotton soaked in a 5 or 10 per cent. solution of cocaine. As soon as the fissure is anæsthetized one or two drops of pure ichthyol are allowed to run into it. This treatment is repeated daily during four or five days, by which time improvement will have progressed so far that dilatation of the anus is easily accomplished, and the fissure may now be treated throughout its whole extent. As a rule, complete healing follows about ten applications.

## STERILITY.

D. Vedder, of Christiana, Sweden, reports the results of examination of 310 married women who had never been pregnant though married at least one year. In fifty of these cases he was able to examine the husband also. He draws the conclusion that in 70 per cent. of these cases the husband is to blame for the sterility, either through impotence or through infecting his wife with gonorrhœa.—*Norsk Magazin for Lagevid.*

## HERMAPHRODITISM A VARIETY OF THE FEMALE SEX.

Virchow's experience has convinced him that on the whole hermaphrodites belong to the female sex. He has never discovered a teste in any hermaphrodite, although it is a difficult matter to decide exactly the nature of the seminal gland, upon which alone the actual question of the sex depends. There is only one authentic case on record (Obolenski's) in which both testes and ovaries were present.—*Klin. Therap. Woch.*

Boils.—Bulkley's patients have derived much relief from an ointment containing 5 to 10 grains of carbolic acid, a drachm or two of fluid extract ergot, two drachms each of powdered starch and zinc oxide, and eight drachms of rose-water ointment. The mixture is spread on a moderately thick layer of absorbent cotton, which is held in place by strips of plaster at the sides of the boil.—*Denver Med. Times.*

# Book Reviews.

Conservative Gynecology and Electro-Therapeutics. By G. Betton Massey. Published by F. A. Davis Co.

The author of this work is indeed to be congratulated on the third edition just published. It is eminently up to date, being rather a work for a practitioner who has already a knowledge of electricity than the student who knows nothing about the subject. The author presupposes one is already familiar with the forms of Batteries, their uses and effects, and commences immediately on woman and her ailments. The chapters on "Menstrual Derangement" and "Inflammatory Affections," with their excellent plates, are especially good. The chapter on "Fibroids" is good on the whole, but we cannot agree on the method of abdominal puncture being harmless.

The work is very interesting to one, and can be read with profit.

---

Hyde on the Skin—New (4th) Edition. Just ready.

A Practical Treatise on Diseases of the Skin. For the use of Students and Practitioners. By J. Nevins Hyde, A.M., M.D., Professor of Dermatology and Venereal Diseases in Rush Medical College, Chicago; and Frank H. Montgomery, M.D., Lecturer on Dermatology and Venereal Diseases, Rush Medical College, Chicago. New (fourth) edition. In one octavo volume of 815 pages, with 110 engravings and 12 full-page plates, four of which are colored. Cloth, $5.25; leather, $6.25. Lea Brothers & Co., publishers, Philadelphia and New York, 1897.

It is significant of the recognized value of this work that the demand for a new edition came even earlier than was anticipated by the author or publishers, attesting that it is steadily growing in favor. The reasons for this fact are not hard to find. Professor Hyde is one of the foremost of American dermatologists and teachers and he has been able to impress upon his book the stamp of experience with a clearness that makes it of the highest service as a practical guide as well as a text-book. It answers the needs of the general practitioner, the specialist and the student, and is a happy example of the fact that an apparently wide range of adaptation can be given within the compass of a volume of convenient size and price.

The new edition has been revised throughout, and every chapter bears evidence of the change and improvement made possible by the advance of dermatology. It has also been enriched with new engravings and colored plates.

---

A Hand-Book of Medical Climatology, embracing its principles and therapeutic application, with scientific data of the health resorts of the world. By S. Edwin Solly, M.D., M.R.C.S., late president of the American Climatological Association. In one octavo volume of 470 pages, with engravings and colored plates. Cloth, $4.00. Lea Brothers & Co., publishers. Philadelphia and New York, 1897.

The time is ripe for a scientific, practical and authoritative treatise upon this most important subject, which has hitherto never been placed at the command of the profession. Faith in great curative virtues of climatic prescriptions is too often shown only *after* the failure of drugs, and perhaps the change is ordered without full knowledge of essential conditions. Fortunately, recent years have seen the virtual completion of governmental and professional observations covering practically the whole of the United States, and giving precise data of a range of resorts affording climates of almost every variety and excellence. European nations have long since recognized the health and wealth-giving value of their climatic resources, and have published full data regarding them. Combining all this information often in a comparative and tabular form, Dr. Solly has now for the first time furnished the physician with the information necessary to a choice of a climate adapted to a given case. Thirty years of experience and special study have enabled the author to reduce the vast volume of observations to a scientific basis, and to draw therefrom laws affording trustworthy conclusions of practical applicability. The work is therefore one of importance to every physician, since his power for good can be greatly enhanced by adding an accurate knowledge of this science to his therapeutical armamentarium.

# PUBLISHERS' DEPARTMENT.

POSITION WANTED AS ASSISTANT.—A '98 Graduate of Trinity University desires engagement with practising physician as *locum tenens*, or assistant during 5th year. Please state terms. Address, DOCTOR, CANADA LANCET Office, Toronto.

THE SHIP'S DOCTOR.—The Arlington Chemical Co. are now publishing a very handsome booklet called "The Ship's Doctor," that will be very interesting to many physicians throughout the country. They are also sending out some very handsome photos for framing that may be had on application to The Arlington Chemical Co., Yonkers, N.Y., mentioning THE CANADA LANCET when writing for same.

THE TREATMENT OF CHOLERAIC DIARRHŒA.—The Lambert Pharmacal Co., of St. Louis, have recently published a most useful and valuable collection of clinical reports bearing on the treatment of summer complaints.

A handsomely cloth-bound copy of this work will be sent free to any physician applying for it to the Lambert Company, and will prove a valuable addition to the library.

We are sorry that our copy did not reach us in time for review in this issue; we hope to give it thorough consideration in our next issue.

We desire to call attention to the advertisement of Messrs. Griffiths & Macpherson Company, importers of the English Kola Compound, known as Clarke's.

This preparation of Dr. Clarke's has gained an enviable reputation in England for successful treatment in cases of Asthma and Hay Fever, and is rapidly gaining favor with the profession in Canada. We are informed that its use in cases of Asthma in the Home for Incurables in Toronto has met with marked success.

Messrs. Griffiths & Macpherson will be pleased to send any physician a sample bottle on application to either of their offices, at 121 Church street, Toronto, or 140-142 Cordovan street, Vancouver.

THE PROMPT SOLUTION OF TABLETS.—We are glad to know that the Antikamnia people take the precaution to state that when a prompt effect is desired the Antikamnia Tablets should be crushed. It so frequently happens that certain unfavorable influences in the stomach may prevent the prompt solution of tablets that this suggestion is well worth heeding. Antikamnia itself is tasteless, and the crushed tablet can be placed on the tongue and washed down with a swallow of water. Proprietors of other tablets would have had better success if they had given

more thought to this question of prompt solubility. Antikamnia and its combination in tablet form are great favorites of ours, not because of their convenience alone, but also because of their therapeutic effects.—*The Journal of Practical Medicine.*

---

AN INTERESTING ENGRAVING.—There has just been issued a handsome engraving of an old painting of the first meeting of the Medical Society of London, which was held in 1773, and it contains portraits from life of the most prominent of the original members.

Among those represented are: Edward Jenner; William Saunders, whose work on "Diseases of the Liver" was the authority for many years; John Aikin, a noted miscellaneous writer and the publisher of a "General Biography"; William Babington, author of a "New System of Mineralogy," and one of the founders of the "Geological Society"; Thornton, author of a "Philosophy of Medicine"; Edward Bancroft, a naturalist; Robert Hooper, who published a "Medical Dictionary," and a number of other famous men of their day.

As this was probably the first medical society on record, and was the predecessor of the British Medical Society, the engraving represents an event of much interest to every member of the medical profession, and should prove an attractive addition to the walls of the office or home.

A copy will be mailed to any physician applying for it by the proprietors of the Tongaline preparations, the Mellier Drug Co., No. 2112 Locust street, St. Louis.

---

Very seldom do I say anything for a preparation that might be used as a testimonial, but I feel that I have sufficiently tried Unguentine to lend a word of encouragement to its varied uses. I used it almost exclusively in a case of severe conjunctivitis, due to strong caustic Silver Nitrate, with the most gratifying results. The severe pain ceased almost instantly, the severe burning subsided and the lachrymal fluid checked. Patient comfortable in twenty minutes and slept soundly for the night. We never had any more swelling or further alarm. I have treated another case of conjunctivitis, with similar results, that was brought about by Chrysophranic Acid, used for a ringworm. We use Unguentine exclusively in our family for all sores, bruises, diseases of the skin (including parasitic troubles), and mucous membranes, such as hæmorrhoids, etc. We have equally as good results in general practice. I treat all my cases of operative hæmorrhoids with Unguentine successfully. Endomitritis is treated handsomely by filling six grain capsules with Unguentine and putting two or three of them as far in the uterine canal toward the fundus as possible with suitable forceps and adjusters. The results have been fine with all I have treated so far.

Unguentine is the fat man's friend. I speak from personal experience. It has no superior for chafes. It is worth its weight in gold for this alone to fat folks. The so-called "Tetter" in the hands of our fishermen and watermen has no show for existence when Unguentine is applied freely twice a day.

I am, very respectfully,

F. P. GATES.

R
11
C3
v.30

The Canada lancet

Biological
& Medical
Serials

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY

STORAGE